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THIRTY-SECOND ANNUAL REPORT
OF THE
New York Zoological Society



AUDAD
Ovis tragelaphus

1895

1927

CITY OF NEW YORK

New York Zoological Society

Founded in 1895 for the establishment of the Zoological Park; conservation of the animal life of the world--fishes, mammals, birds; promotion of zoology through exploration and publication; and, in 1900, the direction of the New York Aquarium in Battery Park



THIRTY-SECOND ANNUAL REPORT

Address, *Director*, W. Reid Blair, Zoological Park, 185th Street and Southern Boulevard; *Director*, Charles H. Townsend, Aquarium Battery Park; *Secretary*, William White Niles, 27 Pine Street.

Published at the Office of the Society,
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THE NEW YORK ZOOLOGICAL SOCIETY

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New York Zoological Society

Form of Bequest

I do hereby give and bequeath to the "NEW YORK ZOOLOGICAL SOCIETY," of the City of New York,.....
.....
.....

Membership

Membership.—Membership in the Zoological Society is open to all who are interested in the objects of the organization and desire to contribute toward its support.

Classes.—Annual Membership is \$10. This entitles the holder to admission to the Zoological Park on pay days, when the collections may be seen to the best advantage, all publications of the Society, privileges of the Administration Building, lectures, special exhibitions, and ten complimentary tickets to the Zoological Park for distribution.

Annual Members may become Life Members by the payment of \$200; a subscriber of \$1,000 becomes a Patron; \$2,500, an Associate Founder; \$5,000, a Founder; \$10,000, a Founder in Perpetuity, and \$25,000 a Benefactor.

Address WILLIAM WHITE NILES, *Secretary*,
27 Pine Street, New York, N. Y.

New York Zoological Society

Organized 1895

Presidents

I.	ANDREW H. GREEN.....	1895 to 1897
II.	LEVI P. MORTON.....	1897 to 1909
III.	HENRY FAIRFIELD OSBORN	1909 to 1925
IV.	MADISON GRANT	1925

First Vice-Presidents

I.	J. HAMPTON ROBB	1895 to 1897
II.	HENRY FAIRFIELD OSBORN	1897 to 1909
III.	SAMUEL THORNE	1909 to 1916
IV.	MADISON GRANT	1916 to 1925
V.	FRANK K. STURGIS	1925

Second Vice-Presidents

I.	CHARLES H. WHITEHEAD.....	1895 to 1902
II.	JOHN L. CADWALADER.....	1902 to 1915
III.	MADISON GRANT	1915 to 1916
IV.	FRANK K. STURGIS	1916 to 1925
V.	HENRY D. WHITON.....	1925

Treasurers

I.	L. V. F. RANDOLPH.....	1895 to 1901
II.	CHARLES T. BARNEY	1901 to 1903
III.	PERCY RIVINGTON PYNE.....	1903 to 1922
IV.	CORNELIUS R. AGNEW.....	1922

Secretaries

I.	MADISON GRANT	1895 to 1925
II.	WILLIAM WHITE NILES.....	1925

Chairmen, Executive Committee

I.	CHARLES E. WHITEHEAD	1895 to 1896
II.	HENRY FAIRFIELD OSBORN	1896 to 1903
III.	CHARLES T. BARNEY	1903 to 1908
IV.	HENRY FAIRFIELD OSBORN	1908 to 1909
V.	MADISON GRANT	1909

Directors

I.	WILLIAM T. HORNADAY, <i>Zoological Park</i>	1896 to 1926
II.	CHARLES H. TOWNSEND, <i>New York Aquarium</i>	1902
III.	W. REID BLAIR, <i>Zoological Park</i>	1926

Board of Managers

Ex-Officio } HON. JAMES J. WALKER, *The Mayor.*
City, New York } HON. WALTER H. HERRICK, *The President, Dept. of Parks.*

Class of 1929

HENRY FAIRFIELD OSBORN	JOHN E. BERWIND
GEORGE F. BAKER	IRVING K. TAYLOR
ROBERT S. BREWSTER	HARRY PAYNE BINGHAM
EDWARD S. HARKNESS	LANDON K. THORNE
WILLIAM B. OSGOOD FIELD	J. WATSON WEBB
EDWIN THORNE	OLIVER D. FILLEY

Class of 1930

MADISON GRANT	GEORGE D. PRATT
WILLIAM WHITE NILES	T. COLEMAN DU PONT
FRANK K. STURGIS	HENRY D. WHITON
OGDEN MILLS	CORNELIUS R. AGNEW
LEWIS RUTHERFURD MORRIS	HARRISON WILLIAMS
ARCHER M. HUNTINGTON	MARSHALL FIELD

Class of 1931

PERCY R. PYNE	W. REDMOND CROSS
GEORGE BIRD GRINNELL	HENRY FAIRFIELD OSBORN, JR.
ANTHONY R. KUSER	GEORGE GORDON BATTLE
MORTIMER L. SCHIFF	BAYARD DOMINICK
FREDERIC C. WALCOTT	ANSON W. HARD
GEORGE C. CLARK, JR.	ROBERT GORDON MCKAY

Officers of the Society

General Offices, 101 Park Avenue, New York, N. Y.

President: MADISON GRANT,

Honorary President: HENRY FAIRFIELD OSBORN

First Vice-President:

FRANK K. STURGIS,

Second Vice-President:

HENRY D. WHITON,

Secretary: WILLIAM WHITE NILES, 27 Pine Street,

Treasurer: CORNELIUS R. AGNEW, 16 William Street,

Assistant Treasurer: THE FARMERS' LOAN & TRUST COMPANY.

Executive Committee

MADISON GRANT, *Chairman*

PERCY R. PYNE,

WILLIAM WHITE NILES,

FRANK K. STURGIS,

ANTHONY R. KUSER,

HENRY D. WHITON,

W. REDMOND CROSS,

HENRY FAIRFIELD OSBORN, JR.

CORNELIUS R. AGNEW, *Ex-officio*.

BAYARD DOMINICK

General Officers

W. REID BLAIR, *Director, Zoological Park,*

CHARLES H. TOWNSEND, *Director, New York Aquarium*

H. C. RAVEN, *Prosector,*

H. DE B. PARSONS, *Consulting Engineer,*

R. L. CERERO, *Bursar,*

HERMANN W. MERKEL, *Consulting Landscape Architect.*

Pension Board

LEWIS RUTHERFURD MORRIS, *Chairman,*

CORNELIUS R. AGNEW, *Treasurer,*

LEE S. CRANDALL, *Secretary,*

W. REID BLAIR,

H. R. MITCHELL,

GEORGE BIRD GRINNELL,

W. REDMOND CROSS,

CHARLES H. TOWNSEND,

GEORGE C. CLARK, JR.,

WILLIAM B. OSGOOD FIELD

Committees of the Society

Finance Committee

FRANK K. STURGIS, *Chairman*.

GEORGE C. CLARK, JR.

PERCY R. PYNE,

CORNELIUS R. AGNEW, *Ex-officio*.

Auditing Committee

WILLIAM WHITE NILES, *Chairman*.

GEORGE C. CLARK, JR.,

W. REDMOND CROSS.

MADISON GRANT, *Ex-officio*.

Art Committee

FRANK K. STURGIS.

Aquarium Alteration Committee

FRANK K. STURGIS, *Chairman*.

HENRY D. WHITON,

CHARLES H. TOWNSEND,

GEORGE GORDON BATTLE

MADISON GRANT, *Ex-officio*.

Editorial Committee

MADISON GRANT, *Chairman*.

W. REID BLAIR

CHARLES H. TOWNSEND,

WILLIAM BEEBE,

GEORGE BIRD GRINNELL

ELWIN R. SANBORN, *Secretary*.

Nominating Committee for Officers and Committees

LEWIS RUTHERFURD MORRIS, *Chairman.*

GEORGE C. CLARK, JR.,

GEORGE BIRD GRINNELL.

Nominating Committee for Board of Managers

H. DE B. PARSONS, *Chairman.*

CHARLES DE RHAM.

CHARLES A. DANA.

Membership Committee

HENRY FAIRFIELD OSBORN, JR., *Chairman.*

Publicity Committee

W. REID BLAIR, *Chairman.*

RAYMOND L. DITMARS,

CHARLES H. TOWNSEND,

WILLIAM BEEBE

ELWIN R. SANBORN.

Executive Staff

Officers of the Zoological Park

W. REID BLAIR, *Director and General Curator*,
H. R. MITCHELL, *Chief Clerk*,
R. L. DITMARS, *Curator, Mammals-Reptiles*,
LEE S. CRANDALL, *Curator, Birds*,
CHARLES V. NOBACK, *Veterinarian*,
WILLIAM BEEBE, *Honorary Curator of Birds*,
WILLIAM MITCHELL, *Cashier*,
CHARLES RENNER, *Civil Engineer and Constructor*,
ELWIN R. SANBORN, *Editor and Photographer*.
H. W. MERKEL, *Consulting Landscape Architect*

Officers of the Aquarium

CHARLES H. TOWNSEND, *Director*,
CHARLES M. BREDER, JR., *Research Associate*,
MARVIN C. FENSTEMAKER, *Secretary*,
IDA MELLEN, *Aquarist*,
JAMES C. MOORE, *Chief Engineer*.

Officers of the Department of Tropical Research

WILLIAM BEEBE, *Director*,
JOHN TEE-VAN, *General Assistant*,
WILLIAM MERRIAM, *Field Technician*,
HELEN TEE-VAN, *Artist*,
MARK BARR, *Physicist*,
JAMES JAMIESON, *Physician*,
FLOYD CROSBY, *Photographer*,
BENJAMIN WARING, *Assistant*,
SERGE CHETYRKIN, *Preparateur*.

Staff, Arcturus Research Work

WILLIAM K. GREGORY,	W. K. FISHER,
C. J. FISH,	H. P. BIGELOW,
M. P. FISH,	T. J. NICHOLS,
JAY PEARSON,	C. M. BREDER, JR.,
LEE BOONE,	A. L. TREADWELL,
DWIGHT FRANKLIN.	

REPORT OF THE EXECUTIVE COMMITTEE

By MADISON GRANT, *Chairman*

THE Executive Committee submit the following report to the Board of Managers for the year 1927:

The Committee have again to record a serious loss during the year by the death of two of its members, who have been associated with the Society for many years: They are Lisenard Stewart and Charles F. Dieterich, both of the class of 1929. Mr. Stewart was a member of the Executive Committee from 1911 to 1920, when the state of his health forced him to resign. He was greatly interested in the Society and was a faithful attendant of the meetings of the Executive Committee, to whose members he had endeared himself by his unfailing courtesy and faithfulness.

ENDOWMENT

No large accessions to the Society's endowment funds were forthcoming during the year, but a bequest of \$500 was contained in the will of Harry Mayer, an unknown benefactor—that is one who had not made known his interest in the Society to any of its officials prior to his death—and the bequest seems to indicate that the Society is gradually assuming a position where it will be generally in line for recognition by those of our public spirited citizens who seek to devote a portion of their wealth to public interests.

There have been no substantial changes therefore in the Society's endowment accounts, a full statement of which will appear in their proper place in this year's annual report.

ATTENDANCE

The Park and Aquarium have each been maintained for the year 1927 up to the Society's previous standards, although on account of the depreciation in the value of the dollar this has entailed a contribution paid out of the Society's income of nearly \$76,000, to the maintenance of these two institutions, owing to the failure of the City to appropriate

within that amount the sum necessary to run the Park and the Aquarium.

The result of the Society's generosity in this respect has been that the public attendance at these two institutions continues up to and even surpasses that of previous years.

ATTENDANCE

The attendance at the Park and Aquarium for the years 1926 and 1927 is as follows:

	1926	1927
Park	2,331,421	2,750,704
Aquarium	1,722,780	2,129,305
	<hr/>	<hr/>
	4,054,201	4,880,009

THE DIRECTOR'S TRIP ABROAD

In order to make sure that the Society was keeping abreast of the times, Dr. Blair was sent abroad during the summer of 1927 for the purpose of visiting the leading zoological parks of Europe. He was chiefly impressed with the order and neatness prevailing abroad, due chiefly to the fact that the foreign zoological parks are maintained by private Societies and the attendance limited to members and paying visitors. He found that the Zoological Park still leads the world in the extent and beauty of its grounds and, taken as a whole, in the exhibits of animals, though some spectacular features exist abroad which we as yet cannot equal. These are the display of animals without visible barriers between them and the spectators, and the grouping of large collections of animals in a single exhibit, such as some seventy flamingoes in a single enclosure at Nurnberg, Hagenbeck's Tierpark at Stellingen, a monkey rock out-of-doors swarming with monkeys, and at Berlin a happy family of African antelopes with representatives of many species.

The conclusion should not be drawn from the foregoing that your Committee have decided that the Park and Aquarium cannot be improved. They are fully aware that the public looks for improvements and additions and with this in mind, directed Dr. Blair to prepare a proposed program of improvements. He made a report thereon, a copy of which was sent to each member of the Board and met with general approval.

IMPROVEMENTS

Python Cage: Although your Committee have been short of funds, owing to the large proportion of income of the Society which has to be devoted to making good the deficiency in the City's maintenance, and although the Committee have decided not to exceed the income of the Society and are reluctant to call upon the Board of Managers of the Society for contributions in its general purposes, improvements are constantly being made, the most notable of which during the year was the installation of a glass and wire enclosure for the pythons, which was erected over a portion of the space in the Reptile House heretofore allotted to the turtles, an installation which has proved very impressive and has received much favorable comment.

Vita Glass: In addition, your Committee have through the generosity of certain members of the Board fitted out a room at the north end of the Lion House, the one assigned as a studio for artists, with Vita Glass and animals suffering from rickets or cage paralysis can now be subjected to the health giving action of ultra-violet rays, which treatment has apparently been most beneficial. This use of the room will not interfere with its use by artists or deprive them in any way of the facilities heretofore furnished them, as animals under treatment can be removed whenever necessary to use the room for studio purposes. Those contributing to the cost of this work are:

Sturgis Endowment Fund	\$250.00
Madison Grant	100.00
Percy R. Pyne	100.00
John E. Berwind	100.00
Landon K. Thorne.....	100.00
Charles F. Dieterich.....	100.00
Lewis R. Morris.....	100.00
William Redmond Cross.....	100.00
Anson W. Hard.....	100.00
George D. Pratt.....	100.00
George C. Clark, Jr.....	100.00
Edward S. Harkness.....	100.00
Mortimer L. Schiff.....	100.00
Edwin Thorne	100.00
Henry Fairfield Osborn, Jr.....	100.00

Harrison Williams	100.00
Coleman duPont	100.00
Ogden Mills	100.00
George F. Baker	100.00
George Gordon Battle	100.00
Henry D. Whiton.....	100.00
Archer M. Huntington.....	100.00

\$2,350.00

Hospital: The laboratory and hospital have been thoroughly cleaned and painted and a powerful Alpine lamp has been installed. The lamp is being used in the treatment of diseased animals with apparently beneficial results. Modern equipment has also been installed under the skilled supervision of Dr. Noback so that we now have an efficient up-to-date hospital.

Soda Pavilion: A new soda water and refreshment building is being erected on the Buffalo Walk at a cost of more than \$50,000 and will be a handsome, complete and much needed addition to the Society's Privilege Department.

The completion of the water-tight copper roof on the Elephant House has fulfilled expectations by putting an end to leakage and to disfigurement and discoloration of the sculpture with which the building is richly decorated. A new slate roof has replaced the former shingle roof of the Rocking Stone Restaurant, which had fallen into a disreputable state of disrepair.

Exhibits: Nothing quite so spectacular as the Komodo lizards or Shoebill "stork" were available during the year, but the collection of animals has been maintained at its full complement and many interesting animals and birds appear among the additions: a baby elephant, only three feet high, probably leads the list in the amount of attention it has attracted, not only among the general public but in the press. The most interesting additions at the Bird House are two humming birds from Cuba which have been kept alive for nine months, quite an unusual record in captivity, a great black cockatoo, from New Guinea, with a most forbidding expression, and a hyacinth macaw from the interior of Brazil, one of the largest of the macaws, and a very handsome bird.

REPAIRS

A large amount of repair work has been done upon the walks and paths at the Park and a great deal of general painting and overhauling, so that the Park presents a well-kept appearance. The completion of the bridge over the Bronx River at Bronxdale has permitted the reopening of the Bronxdale Gate.

The application to the City for funds to complete the Aquarium and to install additional tanks did not progress to the point of an appropriation, but the City's representatives have reported favorably upon it and it is hoped the money will be available early in 1928.

The building and collections at the Aquarium have been maintained at their usual high standard and the attendance there has surpassed all previous records.

TROPICAL RESEARCH DEPARTMENT

The Society through the generosity of the gentlemen who subscribed the necessary funds was able to make a valuable contribution to Science through the expedition of Mr. William Beebe to Haiti, where he obtained a large amount of material. He will devote the present year to getting this material in shape for publication. It will be published as soon as funds are available. His submarine work attracted a great deal of attention, not only among scientists, but among the general public.

Tropical Research Fund: The following subscriptions to the tropical research fund for 1927 were received during the year:

Ogden Mills	\$2,000.00
Anthony R. Kuser.....	2,000.00
Harrison Williams	2,000.00
Marshall Field	2,000.00
William Beebe	1,000.00
Frederic C. Walcott.....	1,000.00
John E. Berwind.....	1,000.00
George D. Pratt.....	1,000.00
George F. Baker.....	1,000.00
Mortimer L. Schiff.....	1,000.00
Robert S. Brewster.....	1,000.00

Edward S. Harkness	1,000.00
Coleman duPont	2,000.00
Dr. Lewis R. Morris.....	500.00
	<hr/>
	\$18,500.00

ART GALLERY ACCOUNT

During the year 1927 the following subscriptions to the Art Gallery Account were received:

Anthony R. Kuser.....	\$250.00
Percy R. Pyne.....	250.00
Irving K. Taylor.....	250.00
Charles F. Dieterich	250.00
Ogden Mills	250.00
Mortimer L. Schiff.....	250.00
George C. Clark.....	250.00
Lispenard Stewart	250.00
	<hr/>
	\$2,000.00

A new painting, "The Timber Wolf," was finished by Carl Run-
gius and added to the Society's collection during the year and Mr. Run-
gius was commissioned to paint a black bear and a wolverine.

RECEPTIONS

The Nineteenth Annual Dinner to the Board of Managers was held through the courtesy of Mr. George C. Clark, at the University Club, on Monday, December 26, 1927. Immediately after the dinner the Annual Meeting of the Board of Managers was held.

Spring Meeting: The Spring Meeting of the Board of Managers was held in the Administration Building on Thursday, May 19, 1927. The meeting was preceded by a luncheon and followed by the Annual Garden Party at which the Ladies' Auxiliary acted as a Reception Committee.

MEMORANDUM OF MEETINGS
1928-1929

Annual Meeting of the Society:
JANUARY 8, 1929, 8:30 P. M.
Hotel Waldorf-Astoria

Meetings, Board of Managers:

<i>Annual Meeting:</i>	<i>Spring Meeting—Park</i>
December, 1928	May 10, 1928, 2:30 P. M.
	Preceded by luncheon

Executive Committee Meetings:
Meetings, 2nd Wednesday Monthly

January 11	May 9
February 8	June 13
March 14	October 10
April 11	November 14
December 12	

Members' Day and Ladies' Day at the Zoological Park:
May 10, 1928, 3 P. M.

AUDITING

The Auditors, Messrs. Peat, Marwick, Mitchell & Co., have audited and found correct the accounts of the Society.

The Auditor's Report, as well as that of the Auditing Committee, follows the Report of the Treasurer.

In Memoriam

LISPENARD STEWART
CHARLES F. DIETRICH

Extracts from Minutes of the 335th Meeting of the Executive Committee held on December 14, 1927, at 3:30 o'clock, at the residence of Madison Grant, 330 Park Avenue.

Mr. Sturgis presented the following resolutions on the death of Lispernard Stewart and Charles F. Dietrich:

"The useful and earnest life of Lispernard Stewart came to a close at his residence in this city on the 15th of October, 1927, after a long and painful illness borne with great fortitude and undaunted courage.

"Mr. Stewart was descended from a long line of ancestors who had ever been distinguished for their civic pride, their loyal devotion to the best interests of the city, which was their home, and their wise vision as regarded its future development and welfare.

"It was through following their intelligent and beneficent example that Lispernard Stewart early in life devoted himself to public interests and aided in many different directions with unselfish ability.

"Gifted with a liberal fortune he gave freely and wisely, thereby promoting the interests which were near to him and absorbed his personal attention, as well as those of the community at large through the medium of education, medicine and law.

"Mr. Stewart had a wide circle of friends and his death will be truly mourned by the many citizens who admired and respected him."

"WHEREAS, Charles F. Dietrich has been a member of the Board of Managers for twenty-seven years and has always shown a keen interest in the affairs of the Society and has contributed generously to its funds, and

"WHEREAS, the Committee has learned of the death of Mr. Dietrich, with sincere regret,

"RESOLVED, that as an expression of such regret, this resolution and preamble be spread upon the minutes of the Executive Committee and the family of Mr. Dietrich advised of the action taken."

ACKNOWLEDGMENTS

The Directors of the Park and Aquarium and their respective staffs have worked faithfully to maintain their institutions at a high standard of efficiency. The Committee desires to acknowledge with appreciation their zeal and energy.

MADISON GRANT, *Chairman*

PERCY R. PYNE

BAYARD DOMINICK

WILLIAM WHITE NILES

HENRY D. WHITON

FRANK K. STURGIS

W. REDMOND CROSS

ANTHONY R. KUSER

H. FAIRFIELD OSBORN, JR.

CORNELIUS R. AGNEW, *Ex-officio*



CAPE BUFFALO, (*Bubalus caffer*)
Presented to the Zoological Park by the Junior Auxiliary of the Society.

REPORT OF
THE LADIES' AUXILIARY
Of the New York Zoological Society

DURING the year 1927, the varied projects and operations of this important aid of the Society were accomplished with their customary success.

One hundred and ten new members were added to the Junior Auxiliary making a total of over 300 in this organization.

On April 27, an illustrated lecture, *Animal Ventures* in the Zoological Park was held at the home of Mrs. Henry R. Benjamin for the benefit of the Junior Auxiliary; it was enthusiastically received by a large number of the children.

A valuable contribution to the collections of the Zoological Park—A North African Ostrich—was made possible through the efforts of the Junior Auxiliary, the young people contributing \$500 for this purpose.

The usual Garden Party was held in the Park in May; this function as is customary under the auspices of the Ladies' Auxiliary.

Owing to inclement weather conditions and conflicting dates with the opening of the season at Belmont Park the attendance at the Park was not as great as in former years.

The day outings to the Zoological Park made possible through the special fund provided by Miss Pauline Robinson on behalf of the Ladies' Auxiliary of the New York Zoological Society, were a greater success this year than ever before, due partly to the fact that there were more of them—the fund being larger this year (\$285.00) and also through the use of the unexpended balance of last season (\$97.00)—\$250.00 being raised in all (1926)—which provided for a number of outings during the late fall and early spring on Saturdays.

There were twenty-three of these outings, with thirty-two during the summer season and nine during the fall season—September, October and the first week in November, making a total of sixty-four trips. More than 1,800 children participated in this healthful exercise, not counting the number of mothers and babies who were always included.

The outing on August 31st of the 300 boys of the Baseball League marked the success of the season and was a splendid affair enjoyed to the fullest by the young champions.

The courteous treatment given the leaders and their groups at the Zoological Park by the attendants was much appreciated and helped materially in making the days worth while from an educational standpoint as well as the pleasure derived through the play time.

The attached statement gives the number of outings with dates and the various groups taken; also the financial statement for the entire season, together with the disbursement of the fund left over from last year.

MRS. HENRY FAIRFIELD OSBORN, *Chairman.*

MRS. CLARENCE G. MICHALIS

Chairman, Junior Auxiliary of the Ladies' Auxiliary.

MISS PAULINE ROBINSON,

*Chairman of the Ladies' Auxiliary Committee, for Children's
Excursions to Bronx Park.*

Contributions received from members of the Ladies' Auxiliary of the New York Zoological Society, through Miss Pauline Robinson, for excursions to the Zoological Park:

Mrs. George Whitney	\$50.00
Mrs. George F. Baker, Jr.....	50.00
Mrs. William V. S. Thorne.....	25.00
Mrs. Henry M. Tilford	25.00
Mrs. Marshall Field.....	25.00
Mrs. DeForest Grant.....	10.00
Miss Mary Parsons.....	10.00
Mrs. Henry R. Hoyt.....	10.00
Mrs. Morgan Hamilton.....	10.00
Miss Eleanor de Graff Cuyler.....	10.00
Mrs. Percy R. Pyne	10.00
Mrs. Stephen H. Olin.....	10.00
Mrs. William B. Osgood Field.....	10.00
Mrs. Arthur Fowler	5.00
Mrs. Walter E. Maynard.....	5.00
Mrs. H. Fairfield Osborn.....	5.00

Mrs. William G. Rockefeller.....	5.00
Mrs. Clarence G. Michalis.....	5.00
Mrs. Shelton Martin.....	5.00

Total	\$285.00
-------------	----------

STATEMENT OF EXPENSE

<i>Center</i>	<i>Date</i>	<i>No. of Children</i>	<i>Carfare</i>	<i>Treat</i>	<i>Play Leader Salary</i>
Mulberry House	July 12	40	.....	.....	\$4.00
Mulberry House	July 16	40	.....	.....	4.00
Mulberry House	July 19	40	.....	.....	4.00
Urban League	July 19	40	.....	\$4.00	4.00
Bellevue Yorkville	July 20	40	.....	4.00	4.00
Council House	July 21	40	.....	4.00	4.00
College Settlement	July 21	40	.....	4.00	4.00
103rd Street Group	July 22	40	.....	4.00	.....
Urban League	July 26	40	.....	4.00	4.00
College Settlement	July 26	40	.....	4.00	4.00
Bellevue Yorkville	July 27	40	.....	4.00	4.00
Bethany Day Nursery	July 28	40	.....	4.00	4.00
Council House	July 28	40	.....	4.00	4.00
Mulberry House	July 28	40	.....	.....	4.00
Urban League	Aug. 2	40	.....	4.00	4.00
Bellevue Yorkville	Aug. 3	40	.....	4.00	4.00
Council House	Aug. 4	40	.....	4.00	4.00
103rd Street Group	Aug. 5	40	.....	4.00	.....
East 56th St. Yard	Aug. 10	40	.....	4.00	4.00
College Settlement	Aug. 11	40	.....	4.00	4.00
Mulberry House	Aug. 11	40	.....	.....	4.00
Council House	Aug. 11	40	.....	.....	4.00
Urban League	Aug. 16	40	.....	.....	4.00
Mulberry House	Aug. 16	40	.....	.....	4.00
Bellevue Yorkville	Aug. 17	40	.....	4.00	4.00
Council House	Aug. 18	40	.....	4.00	4.00
Mulberry House	Aug. 18	40	.....	.....	4.00
Council House	Aug. 25	40	.....	4.00	4.00
Mulberry House	Aug. 25	40	.....	.....	4.00
Mulberry House	Aug. 26	40	.....	.....	4.00
Mulberry House	Aug. 30	40	.....	.....	4.00
Riis House	Sept. 17	30	\$3.00	3.00	4.00
Federation Sett.	Sept. 17	30	3.00	2.00	.....
Meinhard House	Sept. 24	30	3.00	2.00	.....
Bellevue Yorkville	Sept. 24	30	3.00	3.00	.....
Presentation Day Nur.	Oct. 8	30	3.00	3.00	4.00
East 56th Street	Oct. 8	30	3.00	3.00	.....
East 103rd Street	Nov. 5	30	3.00	3.00	.....
College Settlement	Nov. 5	30	3.00	3.00	4.00
Bellevue Yorkville	Nov. 5	30	3.00	2.00	.....
Boys from Baseball League	Aug. 31	300	30.00	.....	.....
		1810	\$57.00	\$100.00	\$128.00
Total Amount Expended—\$285.00					

UNEXPENDED BALANCE—SUMMER SEASON 1926

<i>Center</i>	<i>Date</i>	<i>No. of Children</i>	<i>Carfares</i>	<i>Play Leader Salary</i>
	1926			
Presentation Day Nursery	Oct. 23	40	\$4.00	.....
Wilson House	Nov. 6	20	2.00	\$4.00
Bethany Day Nursery	Nov. 13	30	3.00	4.00
103rd Street	Nov. 13	30	3.00	.....
Presentation Day Nursery	Nov. 20	40	4.00	4.00
Wayside Day Nursery	Nov. 20	40	4.00	.....
	1927			
Bethany Day Nursery	Mar. 19	30	3.00	4.00
Bellevue Yorkville	Mar. 19	20	2.00	.....
Lisa Day Nursery	April 23	30	3.00	.....
Manhattanville Day Nur.	April 23	30	3.00	.....
Bethany Day Nursery	April 30	20	2.00	4.00
Presentation Day Nursery	April 30	30	3.00	.....
Urban League	April 30	30	3.00	4.00
103rd Street	April 30	20	2.00	.....
Bellevue Clinic	April 30	40	4.00	.....
103rd Street	May 14	35	3.50	.....
St. Pascal's Day Nursery	May 14	15	1.50	.....
Wayside Day Nursery	May 14	20	2.00	.....
Bellevue Yorkville	May 28	30	3.00	4.00
Bellevue Yorkville	June 4	30	3.00	4.00
Bellevue Yorkville	June 9	20	2.00	.....
Bellevue Yorkville	June 11	20	2.00	.....
Bellevue Yorkville	June 18	30	3.00	.....
		650	\$65.00	\$32.00

Total Amount Expended—\$97.00

The Ladies' Auxiliary

OF THE

New York Zoological Society

BAKER, MRS. GEORGE F., JR.,
 COOGAN, MRS. JAY,
 CUYLER, MISS ELEANOR DE GRAFF,
 FIELD, MRS. MARSHALL,
 FIELD, MRS. WILLIAM B. OSGOOD,
 FINCKE, MRS. REGINALD,
 FORSYTHE, MRS. HARRY,
 FOWLER, MRS. ARTHUR,
 GRANT, MRS. DE FOREST,
 HAMILTON, MRS. MORGAN,
 HARRIMAN, MRS. J. BORDEN,
 HOYT, MRS. HENRY R.,
 MCKAY, MRS. ROBERT GORDON,
 MARTIN, MRS. SHELTON E.,
 MAYNARD, MRS. WALTER E.,

MICHALIS, MRS. CLARENCE G.,
 NILES, MRS. WILLIAM WHITE,
 OLIN, MRS. STEPHEN H.,
 OSBORN, MRS. H. FAIRFIELD, JR.,
 PARSONS, MISS MARY,
 PYNE, MRS. PERCY R.,
 ROBINSON, MISS PAULINE,
 ROCKEFELLER, MRS. WILLIAM G.,
 THORNE, MRS. WILLIAM V. S.,
 TILFORD, MRS. HENRY M.,
 TOWNSEND, MRS. E. M.,
 TRIMBLE, MRS. RICHARD,
 WEBB, MRS. ALEXANDER S.,
 WHITNEY, MRS. GEORGE,
 WOODWARD, MRS. WILLIAM.

MRS. HENRY FAIRFIELD OSBORN, *Chairman*.

The Junior Auxiliary
OF THE
New York Zoological Society

ABBOTT, HOPE,
ABBOTT, NANCY,
ABBOTT, POLLY,
ADAMS, AGNES,
ADAMS, JANET SHEARSON,
ADAMS, MARY MORRIS,
ADAMS, PHYLLIS ANN,
AUCHINCLOSS, BARBARA,
AUCHINCLOSS, HUGH,
AUCHINCLOSS, REGINALD,
AUCHINCLOSS, RUTH,
AUDIBERT, MARIE,
AUDIBERT, NATALIE,
BAKEWELL, THOMAS,
BANKS, CYNTHIA,
BANKS, DAVIS,
BANKS, MAUD,
BANKS, VIEVA,
BARROWS, MURIEL,
BATTIE, ANNE,
BENJAMIN, SAMUEL,
BENJAMIN, SARAH,
BENJAMIN, MARY,
BENJAMIN, HENRY ROGER,
BENJAMIN, TOWNSEND,
BIRD, OLIVIA SINGLETON,
BIRD, BARBARA,
BIRD, MARY SINGLETON,
BOARDMAN, BRADFORD,
BOARDMAN, CHRISTINA,
BOARDMAN, CLARINDA,
BOARDMAN, LANDALE,
BONNER, PAUL H.,
BONNER, JOHN TYLER,
BOURNE, HELEN WHITNEY,
BRADY, GENEVEVE,
BRADY, VICTORIA,
BROWNING, ELIZABETH,
BROWNING, HOSEPHINE
BUGLER, ELEANOR,
BUGLER, HENRY G., JR.,
BURKE, STANLEY,
BURKE, WARING,
CHURCH, CHARLES T., 2ND,
CHURCH, NANCY,
CONSTABLE, JOHN PIERREPONT,
CONSTABLE, NANCY,
CONSTABLE, WANDA,
CODDINGTON, JAMES I.,
COOGAN, ALEXANDER GORDON,

COOGAN, FAIRFIELD GORDON,
COOGAN, RHODA GORDON,
CUTLER, JOHN W.,
CUTLER, JUDITH,
CUTLER, PATRICIA,
CUTLER, PETER S.,
CUTLER, SUSAN,
DARLINGTON, HENRY V. B., JR.,
DARLINGTON, JANE,
DARLINGTON, PETER,
DAY, KATHARINE,
DAY, THEODORA,
DEGENER, EDWARD M.,
DEGENER, LOIS ANN,
DEGENER, PAUL ARNOLD,
DELAFIELD, PEGGY,
DICKERMAN, HONOR,
DICEY, CHARLES D., JR.,
DICEY, MARY SLOAN,
DOWD, ANDREA,
DURYEA, NINA,
DURYEA, SAMUEL SLOAN,
EGGERT, FLETCHER,
EGGERT, MARY W.,
ELMENDORFF, ANTHONY,
ELMENDORFF, KATHARINE,
ELMENDORFF, SARAH,
ELMENDORFF, SARAH,
EYER, CYNTHIA,
EYER, GEORGE A., JR.,
FAIRCHILD, BENJAMIN,
FAIRCHILD, FREEMAN,
FAIRFIELD, TALIA,
FERRY, FRANCES,
FERRY, JOHN M.,
FERRY, MAY M.,
FIELD, MARJORY L.,
FIELD, MARY A.,
FILLEY, MARY GRAFTONE,
FINCH, ANNE CRANE,
FINCH, CHARLES,
FINCH, EDWARD RIDLEY, JR.,
FINCH, HENRY LEROY,
FINCH, JOHN,
FINCH, KATHRYN,
FINCH, LOUISE,
FINCH, MARY NOELLE,
FINCH, STEPHEN,
FISHER, CHARLES HUBERT,
FISHER, ELEANOR,

- FISHER, ELLIS,
FISHER, IRVING R.,
FLEMING, WILLIAM W.,
FREEMAN, DAVID,
FRENCH, ELLEN TUCK,
FRENCH, LEIGH H.,
FRENCH, PHYLLIS B.,
FRENCH, VIRGINIA,
FRUEAUFF, ELAINE,
FRUEAUFF, MARGARET,
GODDARD, MARGARET,
GODDARD, STANHOPE,
GODWIN, BETTY,
GODWIN, MILDRED,
GOULD, EVELYN F.,
GRAY, MARION N.,
GREEN, ALLISON,
GOULD, JOHN L.,
GREEN, GEORGINA W.,
HADDEN, KENNETH,
HADDEN, LYDIA,
HAIGHT, FRANCIS T.,
HAIGHT, FREDERICK E.,
HAMMOND, RACHEL,
HENRY, LOUIS F.,
HERRICK, AILEEN,
HERRICK, EUNICE,
HERRICK, WILLIAM,
HIGGINS, ANITA,
HIGGINS, TRUMBULL,
HODGES, ROSAMOND,
HOPE, MARION,
IJAMS, JOHN H.,
IJAMS, SETON,
IRVING, ALEXANDER D.,
IRVING, EVELYN DU PONT,
ISELIN, MARIE,
ISELIN, LEWIS,
ISELIN, PETER,
JAECKEL, AUDRY,
JAMES, BEVERLY,
JAMES, HENRY, JR.,
JAMES, MARY,
JAMES, MORGAN U. B.,
JAMESON, EDWIN C., JR.,
JONES, LUCY,
JONES, PEGGY,
JONES, POLLY,
KINGSFORD, FRANCES HAMILTON,
KINGSFORD, HELEN LAWRENCE,
KINGSFORD, IRVING B.,
KINGSFORD, WILLMER H.,
KINNICUT, DOROTHY MAY,
KISSEL, ABBY THORN,
KISSEL, WILLIAM THORN,
KNAPP, ELIZABETH B.,
LAWRENCE, CONNOR,
LEE, FRANK P.,
LIVINGSTON, BENEDICT,
LLOYD-SMITH, MARJORY,
LOCKWOOD, MAURICE DE FOREST,
LORD, COUPER,
LORD, MARY LOUISE,
LOWENSTEIN, JUDITH,
LOWENSTEIN, REBECCA,
MCGOVERN, COLEMAN B., JR.,
MCGUSTY, HENRIETTA,
MCGUSTY, JAMES C.,
MCGUSTY, KATHLINE,
MCGUSTY, MARY,
MCILVAINE, ARCHIBALD G.,
MCILVAINE, JOHN CURTIS,
MARSH, ISABEL,
MARSH, JUDITH,
MARTIN, JANE,
MARTIN, MYRA,
MARSTON, GEORGE V. W.,
MILBANK, MARGARET,
MILLER, HENRY F.,
MILLER, RUTGER B.,
MICHALIS, HELEN LOUISE,
MICHALIS, CLARENCE F.,
MICHALIS, HENRY C. DAY,
MICHALIS, MARTHA M.,
MILLIKIN, ANNE,
MILLIKEN, GERISH, JR.,
MILLIKEN, ROGER,
MOORE, ALLISON,
MOORE, JOHN,
MOORE, NINA,
MORRIS, BETTY,
MORRIS, LETA,
MORRILL, JOYCE SHELTON,
MORRILL, WHITNEY FRENCH,
MYRICK, BILLY,
MYRICK, CYNTHIA,
MYRICK, MARION,
MYRICK, SHIRLEY,
NOYES, DAVID,
NOYES, FRANCES,
NUGENT, JULIAN,
NUGENT, WILLIAM,
ORVIS, BARBARA,
ORVIS, CLAY,
OSBORN, ALEXANDER PERRY, JR.,
OSBORN, ALICE DODGE,
OSBORN, ANNE STEELE,
OSBORN, BAYARD,
OSBORN, FREDERICK,
OSBORN, JOHN J.,
OSBORN, JOSEPHINE ADAMS,
OSBORN, LUCRETIA PERRY,

OSBORN, MARGARET L.,
OSBORN, MARY STEELE,
OSBORN, NATHALIE HAZARD,
OSBORN, SHIRLEY MARJORIE,
OSBORN, VIRGINIA S.,
OSBORN, WILLIAM,
PAINE, AUGUSTIN D.,
PARDEE, ALTHEA,
PARDEE, MARGARET,
PARDEE, TREVOR,
PARSONS, LIVINGSTON, JR.,
PARSONS, SARAH L.,
PATTERSON, EDWARD,
PATTERSON, HENRY,
PEALE, PATRICIA,
PELL, GLADYS S.,
PELL, DORINDA T.,
PELL, MARY DUANE,
PENNOYER, PAUL,
PENNOYER, VIRGINIA,
POOR, DAN,
POOR, HENRY,
POOR, PRISCILLA,
POOR, RUTH,
POST, CHARLES,
POST, JOY,
POST, JULESTER LENA,
POST, JULIA,
POLK, ALICE P.,
POLK, JAMES POTTER,
PRATT, ANNE,
PRATT, CAROLINE,
PRATT, CHARLES, JR.,
PYNE, INSLEY,
RANDOLPH, SALLY,
PYNE, RIVINGTON,
RAYMOND, ALLISON,
RAYMOND, AUDRY,
READ, CURTIS S.,
READ, DAVID W.,
READ, WILLIAM,
REVILLON, LEONE,
RIGGS, PETER,
RICHARD, HAROLD,
RICHARD, PHYLLIS,
RICHARD, TRUMBULL,
RICHARD, VERA,
RICHARDSON, DAPHNE,
RICHARDSON, DEREK,
RICHARDSON, STANTON,
RICHMOND, H. THORNA,
RICHMOND, ROBERT,
RILEY, EDGAR A.,
ROBBINS, ELIZABETH B.,
ROGERS, CATHERINE,
ROGERS, ELIZABETH,

ROGERS, MARGUERITE,
ROGERS, MAY,
ROOSEVELT, GEORGE E., JR.,
ROOSEVELT, MARGARET C.,
ROOSEVELT, MEDORA T.,
ROSS, DOROTHY K.,
ROSS, RUBIN J., JR.,
SALISBURY, LUCIUS, JR.,
SCHIEFFELIN, MARY S.,
SCHMIDT, ALEXANDER,
SHEPARD, FINLEY J., JR.,
SHEPARD, HELEN A.,
SHEPARD, OLIVIA M.,
SHRADY, LEWIS,
SIMMONDS, JULIUS,
SIMMONDS, SOFIA,
SIMMONS, GEORGIA,
SKIDMORE, SAMUEL T.,
SLOANE, EVELYN,
SLOANE, GRACE ELSIE,
SLOANE, NANCY,
SPRAGUE, MARY HOLT,
STORER, ADELAIDE,
STORER, FRANCIS E., JR.,
SYMINGTON, BETTY GAY,
SYMINGTON, CHARLES, JR.,
SYMINGTON, PAMELA,
TAYLOR, EUGENE SHAW,
TAYLOR, FENTON, JR.,
THACHER, ISABEL,
TINGUE, EDITH,
TINGUE, HOWARD, JR.,
TOMKINS, BOYLSTON ADAMS, JR.,
TONNELE, MARIE,
TORNEY, CONSTANCE,
TOMKINS, ELEANOR LOUISE,
TWINING, EDMUNS S., JR.,
VANTINE, BETTY,
VANTINE, JOAN,
VIETOR, MARY ANNE,
VIETOR, OLIVER ALLEN,
VIETOR, THOMAS L., JR.,
WALKER, ELEANOR C.,
WALKER, JOSEPH, 3RD,
WEBB, BARBARA,
WEBB, FREDERICK,
WEBB, OSBORN,
WEBB, RICHARD,
WEBER, CLARE S.,
WEBER, ORLANDO F., JR.,
WEST, DAVENPORT, JR.,
WEST, JOHN P.,
WIGHAM, REGINALD E.,
WIGHAM, ROSANNE L.,
WHITNEY, ELIZABETH E.,
WHITNEY, MARTHA PHYLLIS,

WHITMEY, ROBERT B.,
WINSLOW, HARRIET A.,
WINSLOW, MARY OLIVE,

WINSLOW, T. SCUDDER,
WOOLVERTON, HUGH,
WOOLVERTON, WILLIAM,

REPORT OF THE DIRECTOR OF THE ZOOLOGICAL PARK

By W. REID BLAIR

THE year 1927 was notable because it recorded the greatest attendance of visitors since the Park was opened to the public in 1899. It was also notable because of the number of rare and interesting animals received and because so few of our large and important mammals were lost through death.

The collections of the Park have been fully maintained at the high standard of past years, and the health of the collections remains good.

At the spring meeting of the Board of Managers held in the Zoological Park, a sum of money was subscribed by members of the Board for the purpose of installing Vita Glass in the studio room of the Lion House in order to study the effect of this glass on the health of some of our animals. Since it has been demonstrated that the beneficial ultra-violet rays of sunlight are absorbed by ordinary glass roofs and windows, it will be of interest to study the effect of the use of this glass and the extension of it, provided the results seem beneficial.

The highly important and beneficial influence of unrestricted sunlight is too often underestimated, with the result that a number of animals in captivity show evidence of certain diseases resulting from their being deprived of the ultra-violet rays of sunlight.

It is well understood that the conditions of temperature, light, fresh air and humidity are of the greatest importance in the keeping of collections of animals in captivity. Only too frequently we think that by providing our animals with good food, fairly clean quarters and heat we do all that is required for the health and comfort of our captive charges.

Following its policy of constantly endeavoring to keep the collections of mammals, birds and reptiles up to the highest standard of interest and variety, the Zoological Park during the year acquired a number of valuable and unusual animals, among them an African Cape buffalo, the gift of the Junior Auxiliary of the Society; a baby Indian elephant, a black jaguar, a male wart-hog, several rare large African

antelopes and a male Grevy zebra, as well as a very rare hyacinthine macaw and harpy eagle from South America, a great black cockatoo from New Guinea and a black-necked stork.

ATTENDANCE

The yearly attendance at the Zoological Park is steadily increasing and this institution is maintaining its established position as a centre for zoological education and information as well as a popular place for recreation. In 1927 the number of visitors was 2,750,704, the largest in the history of the Park.

The monthly attendance figures for the past two years are as follows:

	1926	1927
January	84,409	60,928
February	47,729	81,327
March	110,524	130,339
April	202,797	405,174
May	341,590	446,777
June	321,372	243,916
July	309,058	330,865
August	265,696	263,640
September	308,223	344,345
October	140,775	251,229
November	146,092	121,872
December	53,156	70,292
	<hr/>	<hr/>
	2,331,421	2,750,704

DIRECTOR'S EUROPEAN TRIP

At the spring meeting of the Board of Managers, the Director of the Zoological Park was instructed to visit the London Zoological Garden and some of the principal zoological gardens on the continent for the purpose of studying the newer developments there which might be of interest to our institution, and to purchase such animals as might be available and desirable.

The Director's itinerary included the gardens of the following cities: London, Dublin, Rotterdam, Amsterdam, Hamburg, Hagen-

beck's Tierpark at Stellingen, Berlin, Leipzig, Dresden, Nurnberg, Frankfort and Paris, as well as several private zoological collections.

In nearly all of the places visited the Director found evidences of renewed interest in zoological gardens since the World War and many have already attained or surpassed their pre-war standing.

The limited spaces available in Regent's Park for the London Zoo for the scientific arrangement of its collections is a severe handicap and limits its future development. In London the newer developments consisted of a recently completed aquarium, a new reptile house and a monkey house now nearing completion. The new monkey house will provide an abundance of light and will be heated and lighted by electricity. The entire roof will be equipped with the new Vita Glass. Many rare and interesting specimens of mammals and birds were found at the London Zoo, among them a takin (*Budorcas taxicolor*) from northern Assam, a genuine zoological prize. The takin is a heavily built and comparatively large animal, standing about 50 inches at the shoulder, with stout legs, large lateral hoofs and a small goat-like tail. In conformation it somewhat resembles our musk-ox and weighs about 600 pounds. The fine display of the rare birds of paradise on exhibition at the London Zoo is another feature of their collection.

The Hagenbeck Tierpark has been reopened and contains many interesting exhibits. The sea-lion and penguin pool is one of the finest on the continent. Seventy-eight specimens, representing four species of penguins, were on exhibition there. The two adult elephant seals which have been shown by Hagenbeck for several years are still the chief attraction at this Park. The male weighs about 6,000 pounds.

The spectacular barless cages and ranges originated by the Hagenbecks at their Tierpark are being introduced in a number of zoological gardens on the continent.

The Berlin garden was by far the best seen in Europe, both in scientific arrangement and in the richness of its collections. The new monkey house recently completed there contains many new features tending toward the greater comfort and health of the animals, and on the whole is probably the best arranged and best equipped building for primates in existence.

The new Elephant House recently built at the Leipzig Zoo contains some new features which are unique. There are no bars and the ele-

phants are separated from the public by means of a narrow moat and a guard rail, which gives an unobstructed view of these interesting animals.

In the Jardin des Plantes, Paris, a number of rare zoological specimens were found, among them a five-year-old gorilla which has been on exhibition there nearly a year; a rare bongo, a pair of harnessed antelopes and a pair of the Madagascar foussa which has bred in the Garden several times.

COOPERATION WITH THE CITY SCHOOLS

The public and high school system of the city, under the Board of Education, is constantly extending its connections with the Zoological Park and Aquarium, to the great benefit of all. The general practice of visiting the Park, under the direction of teachers and the guidance of curators and keepers, is encouraging and every effort is being made to meet the growing needs of work along these lines. The temporary lecture structures which have been used in the past have amply demonstrated the need for a large auditorium where lectures on natural history in the regular school course of study could be carried out.

The Zoological Society has an extensive series of motion pictures depicting the life histories of mammals, birds and reptiles, which are available for use in the public schools and it is pleasing to note the gradually increasing requests for the use of these films in the Department of Visual Education.

As in other years, a series of mammals, birds and reptiles were placed on deposit during the school year in the high schools of the city. The schools have their own attendants to look after the collections but a keeper from the Zoological Park made regular visits of inspection and furnished expert advice on the care of the animals.

ACCOMMODATIONS FOR ARTISTS

The Zoological Park also provides facilities for artists who specialize in the painting and sculpturing of wild animals and birds, as well as the many art students who desire to learn the portraying and modeling of animals as a part of their professional training. A room is provided in the Lion House where artists may store their apparatus and the large collections of animal photographs at the Park are placed at the disposal of those needing them in connection with their art studies.

ADDITIONAL PARKING SPACE

The work of filling the lower buffalo range along the western boundary of Boston Road is progressing favorably and it is expected that this added parking space for automobiles will be available for the use of our visitors in the spring of 1928. As laid out, it will provide accommodations for about three hundred cars. This will supplement the inadequate accommodations at the Concourse Entrance. Owners of motor cars who like to take their families to the Zoological Park will be glad to know that this additional space will soon be available.

The lower portion of the buffalo range was decided on as the best available space within the Zoological Park for this purpose since this part of the Park is too low and damp for a suitable range for buffaloes.

NEW BRONXDALE BRIDGE

Early in June the new concrete bridge which carries Boston Road over the Bronx River in the Zoological Park was completed and officially opened by appropriate exercises under the direction of the Commissioner of Parks for the Bronx, Hon. Joseph P. Hennessy. Commissioner of Plants and Structures Goldman, under whose direction the plans for the new structure were completed, formally turned the bridge over to the Park Department and briefly reviewed the history of the old bridge, an iron structure which had been erected in the years when horse-drawn vehicles were the vogue. With the influx of the automobile, however, the bridge became obsolete and a menace.

During the past few years many accidents have occurred on this narrow structure, situated as it was at the foot of a hill and on a sharp curve. The new and handsome concrete bridge has a roadway of 35 feet, in addition to two pedestrian sidewalks and has been built in such a way as to eliminate the dangerous curve. When the old structure has finally been removed the beauty of this portion of the Park will be greatly enhanced.

HEADS AND HORNS COLLECTION

The collections in the Museum building were increased during the year by the acquisition of a number of specimens, all of them coming as gifts. The largest single acquisition was the gift of 32 specimens

from the collection of the late J. H. Whitehouse, of Irvington, N. Y., received through the courtesy of the American Museum of Natural History. An unusually fine large head of American Elk, with a spread of $62\frac{7}{8}$ inches, was donated by Mr. Robert Swan, Hingham, Mass., and from the estate of the late Dr. William A. Valentine there were received six mounted heads of American big game animals and two pairs of moose antlers. A complete list of the accessions appears in another part of this volume.

It is intended to complete the collections in the Heads and Horns Museum within the next few years and a determined effort will be made to locate heads that are desirable to be added to our collection.

BACKGROUND PAINTINGS IN THE LION HOUSE CAGES

Early in the spring of 1927 Mrs. Elizabeth Rungius Fulda was engaged by the Zoological Society to paint a series of habitat backgrounds in the outside cages of the Lion House and the work was completed in time to be viewed by the members of the Society at the Garden Party in May. The paintings present a scenic panorama beginning at the south end of the Lion House and carried along in a continuous line to the north end of the building.

GATE RECEIPTS

The gate receipts for the year, amounting to \$19,796.75, were all expended in making necessary repairs and improvements in the Park. The gate receipts which are annually expended for such repairs, while not adequate for the needs of the Zoological Park, do, however, provide funds which permit the making of repairs that are suddenly thrust upon us and for which we have no emergency funds available. There are 24 animal buildings (16 of them heated) in addition to the Administration, Service and comfort buildings; eight miles of walks and roads and nearly eleven miles of range, corral and cage fences, all of which require constant repairs and replacements to keep them in order.

CONSTRUCTION WORK

A survey of the repair and improvement work carried on in the Zoological Park reveals a great amount of work accomplished in one year and also shows the extent to which our resources of labor, mate-

rials and funds are taxed annually, in order to maintain the physical aspects of the Park on a basis of the greatest service and usefulness.

Construction work in the Zoological Park during 1927 included among other things the laying of 1,170 sq. yds. of Tarvia walks, resurfacing 11,798 sq. yds. of Tarvia walks, replacing or rebuilding 6,710 lineal feet of fences, replacing and repairing 60,000 lineal feet of fence guard wires and posts, and painting 11,300 lineal feet of fences.

A large new cage for pythons was constructed in the center of the Reptile House, greatly adding to the attractiveness of this building. A new roof was placed on the Elephant House and an 8 inch cast iron water pipe line, with valves and fire plugs, was installed from 180th Street to the Antelope House. The interior of the Large Bird House, the Boston Road Entrance, the Primate and Lion House outside cages, the Service Building, Paint Shop and toilets were renovated, and the Rocking Stone Restaurant, lunch pavilion and west side of the Ostrich House were reguttered. The Bronxdale Entrance, which for several years had been closed, was rehabilitated, as were the outside cages of the Pheasant Aviary and the west side of the Bronx River south from the Boat House.

In addition, 563 miscellaneous jobs of plumbing, painting, iron and cement work were completed.

As usual, the care of the woods in the Park demanded and received a great deal of special attention during the past year. In addition to looking after general cavity work and pruning on all trees and border plantations throughout the Park, the trees in the forested sections also received careful and necessary attention. Where necessary, trees were removed and limbs which, because of growing weakness and other reasons, threatened to become dangerous to visitors, were cut away.

ADDITIONAL COMFORT STATION NEEDED

The increased attendance at the Zoological Park during the past few years has rendered our present public comfort accommodations entirely inadequate. The last appropriation for a public comfort station in the Zoological Park was granted in 1910, at which time our yearly attendance was about 1,440,000. The average attendance at the Zoological Park for the past five years has been 2,440,396. These figures

readily indicate how far the Zoological Park has outgrown its accommodations for the comfort of visitors.

A location has been selected for a new building in a portion of the Park that is usually congested and which would at the same time be accessible to the many visitors who enter the Park by automobile through the Concourse Entrance. A request for an appropriation of \$35,000 to cover the cost of construction has been made to the Department of Parks and it is hoped and expected that the necessary revenue bonds will be issued by the city in 1928 so that the work may proceed and the building be completed at as early a date as possible.

DEPARTMENT OF MAMMALS

RAYMOND L. DITMARS, Curator; JOHN TOOMEY, Head Keeper

The routine of a large department, which includes daily contact with the visiting public and the safe maintenance of a collection of animals, is extremely varied and carries many responsibilities. With nearly three million people visiting the Park each year, the personnel of the Keepers' Staff is of great importance. Courtesy and tact with visitors are as necessary as competence in caring for the collections. Then again, there must be uniform diligence in the care of hundreds of gates and locks. The extremely small number of escapes and accidents during our history of nearly thirty years has resulted from the close contact of heads of departments with their respective staffs, and the extremely careful schooling of new men.

There have been several important changes in the Keepers' Staff of this department, the past summer. William Grebe, keeper at the Lion House, was retired to pension after twenty-five years of service, because of failing health. At the time of retirement he was sixty-nine years old. William Rawlinson of the Primate House staff resigned after five years' service. These positions were filled by employees in the Park, who had filed applications for prospective openings in the Mammal Department. Two keepers were transferred to the working forces, and men from the latter were selected to take their places.

No marked changes took place in the arrangement of exhibits during the year. Losses were comparatively few and a number of important purchases were made. These largely related to hoofed animals and added to the impressiveness of the collection in the Antelope House.

This building now contains the following new specimens: an adult male specimen of the handsome Gray's waterbuck, a pair of sable antelope, and a male Cape buffalo. Among other hoofed animals purchased were a pair of spotted llamas, female Bactrian camel, male Grevy's zebra and a male warthog. The most important purchase of the year was a young female Indian elephant, which, to our visitors, is a typical baby elephant in comparison to the towering Alice in the adjoining stall. This young animal is but thirty-nine inches high, although gifted with the substantial weight of 490 pounds. Among the carnivores, a black jaguar and golden cat were added to the collections. Our gifts are separately acknowledged in another portion of this report.

The following shows an interesting series of births during 1927: one mongoose lemur, one brown lemur, four raccoons, four red deer, two fallow deer, three Barasingha deer, one hog deer, five axis deer, four white-tailed deer, five American wapiti, two yaks, three bison, two anoa, four aoudad, four Himalayan tahr, one mouflon, four bush pigs, one nylghai, one Chapman zebra, one black-faced kangaroo, one Woodward kangaroo and one wallaroo.

Educational work and cooperation with visual education committees has continued and broadened. Immediately after the opening of schools the past fall, the Curator delivered a lecture before the New York Biology Teachers' Association, in the auditorium of the American Museum of Natural History. This was preceded by a dinner and conference. The lecture was illustrated with six reels of motion pictures on natural history and showed the possibilities of teaching biology with such material. Each reel was specifically arranged to demonstrate motion picture records of different phases of animal biology, there being a reel each of mammals, birds, reptiles, amphibians, insects and marine life. This lecture was productive of highly satisfactory results and brought us into cooperative contact with a number of new high schools. Our library of Living Natural History films is now in active circulation, extending into the Manhattan district. We had at first confined our distribution to the Bronx. This service to the schools is extended without costs of any kind.

Miss Rosemary Mullen, biology teacher in charge of the zoological room at the Washington Irving High School, communicated with this department during the year, and explained that the City was

prepared to greatly improve her department and build a new and larger structure on the roof of the building. Together with Mr. Renner, our Chief Constructor, the Curator visited the High School, designed a series of new cages, and applied the latest approved types of drainage, heating, lighting and ventilation to the plans for this new room. Mr. Renner prepared the blue-prints which were submitted to the city. The animal collection at the Washington Irving High School is loaned from the Park, the specimens being returned to us during the period of summer vacation.

Other contact with outside institutions included a lecture before the American Institute of Park Executives, in Philadelphia, on September 28th. A series of motion pictures was presented, showing Zoological Park animals.

Following is a census of the mammal collection, taken the last day of the year:

<i>Orders</i>	<i>Species</i>	<i>Specimens</i>
Primates	42	79
Carnivora	52	120
Chiroptera	1	1
Pinnipedia	2	8
Rodentia	17	52
Ungulata (Artiodactyla)	50	213
Ungulata (Perissodactyla)	13	31
Proboscidea	3	4
Edentata	3	5
Marsupialia	10	32
Total	193	545

DEPARTMENT OF BIRDS

LEE S. CRANDALL, Curator; WILLIAM BEEBE, Honorary Curator;
SAMUEL STACEY, Head Keeper

The year 1927 was signalized by an unusual paucity of arrivals in the bird market. Moreover, the birds received were confined to a comparatively small number of species, so that accessions of special interest were difficult to secure. The number of new species recorded during the year was considerably smaller than in previous seasons, al-

though we were able to maintain an approximation of our recently established objective of 800 species and 2,000 specimens.

On March 18, a number of Humboldt penguins (*Spheniscus humboldti*) were received by a local dealer. These birds were widely distributed amongst American zoological gardens, with almost uniformly unsatisfactory results. We secured six specimens, one of which was presented to the New York Aquarium. During the extreme heat of summer, we lost three of the birds, but the two survivors are now in excellent condition and have assumed adult plumage. It is probable that these two birds and the one at the Aquarium are all that remain of this shipment. Humboldt's penguin is a rare bird in captivity and has never before been represented in our collection.

Mr. Charles L. Fagan, an employee of the Grace Steamship Line and to whom the Society is indebted for the gift of many fine birds from the western coast of South America, brought us, on March 21, a seed snipe (*Attagis rumicivorus*). While the seed snipes are most closely allied to the shore birds, they have apparent affinities with the game birds and take the place of the latter group in the barren districts of southern and western South America. We have never previously exhibited a seed snipe, but this is evidently due to no lack of hardiness, for our specimen is quite at home in its new environment.

In May, a great black cockatoo (*Solenoglossus aterrimus*) was secured from a dealer who had obtained the bird in Singapore. This is the largest and most striking of all the cockatoos, being grayish black in color, with a huge, strongly hooked beak, a long pointed crest, and a bright patch of naked red skin on the side of the face. The species has had a bad reputation for delicacy in captivity, but so far our specimen has successfully lived it down.

On May 4, a New York dealer succeeded in landing a small lot of Ricord's emerald hummingbirds (*Ricordia ricordii*) from Cuba. With some misgivings, a pair was purchased and installed in a specially constructed, glass-enclosed cage. All of the hummingbirds are delicate in confinement, and as Ricord's is a particularly tiny species, we had small hopes of our ability to keep them. However, they soon gained in strength and another glass case quickly became a necessity, as the well known pugnacity of these birds asserted itself. Twice daily, they are fed on a preparation of condensed milk, Mellen's Food, and honey,

which they draw up freely with a suction-pump action of beak and tongue. Fresh cut flowers or flowering plants are kept in the cages continually. After nearly nine months with us, they remain in perfect condition.

During the summer, great excitement was caused in the avicultural world by the arrival, in England, of considerable numbers of two African lovebirds which previously had been extremely rare: the masked (*Agapornis personata*) and Fisher's (*A. fischeri*). Eventually, they reached New York and pairs of each were secured. We now take pride in exhibiting all of the eight species of these fascinating little parrots that have been obtained alive. Beside the masked and Fisher's, there are: the gray-headed (*A. cana*), from Madagascar; the Abyssinian (*A. tarranta*); the red-faced (*A. pullaria*), from West Africa; the Nyassa (*A. lilianae*); the black-cheeked (*A. nigrigenis*), from Rhodesia; and the peach-faced (*A. roseicollis*), from southwestern Africa.

Two other important accessions, received during the autumn, were a Harpy eagle (*Harpia harpyja*) and a hyacinthine macaw (*Anodorhynchus hyacinthinus*). Our old Hyacinthine, received in 1915, died in March, 1926, but due to a sporadic local demand for this species, extravagant prices were asked and received for the few arrivals. This flurry in the market has now subsided and we were able to purchase our splendid new bird at a reasonable figure. The Harpy eagle is one of the finest of all this group. It is seldom obtainable from dealers, and it was a fortunate chance that enabled us to secure what has proved to be an exceptionally good specimen.

Our most important loss, during the year, was our old male north African ostrich (*Struthio camelus*). This bird was brought from California, at a nominal cost, in 1918, and lived out of doors, winter and summer, until his death on February 23, 1927. We hope to be able to replace this bird during the coming summer, but the cost will be considerably more than that in 1918.

As more fully reported by Dr. Noback, in this volume, the use of portable ultra-violet quartz lamps has been carried on extensively in this department. We feel that important results have already been obtained, and the experiments will be further extended during the coming year.

The voluminous correspondence and the intricate records of the department, which have now reached formidable proportions, have been kept up to date by the efficient assistance of Miss Grace Davall.

SPECIES OF BIRDS NEW TO THE COLLECTION

Received During 1927

- Rufous Cuckoo-dove—*Macropygia rufa* Ramsay
 Red-throated Ground Dove—*Gymnopelia ceciliae* (Less.)
 Lemon Dove—*Aplopelia larvata larvata* (Temm. & Knip.)
 White-fronted Amethyst Pigeon—*Gallicolumba kubaryi* (Finsch)
 Humboldt Penguin—*Spheniscus humboldti* (Meyen.)
 Seed Snipe—*Attagis rumicivorus* Esch.
 East African Crowned Crane—*Balearica regulorum gibbericeps* Reich.
 Abyssinian Pigmy Falcon—*Polihierax semitorquatus castanotus* (Heug.)
 Great Black Cockatoo—*Solenoglossus aterrimus* (Gmel.)
 Spix Macaw—*Cyanopsittacus spixi* (Wagl.)
 Blue-rumped Parrakeet—*Psittinus incertus* (Shaw)
 Fischer's Lovebird—*Agapornis fischeri* Reichw.
 Masked Lovebird—*Agapornis personata* Reichw.
 Ricord's Emerald Hummingbird—*Riccordia ricordii ricordii* (Ger-
 vaise)
 Blue-naped Coly—*Colius macrourus* (Linn.)
 White-breasted Touraco—*Corythaixoides leucogaster* (Rüpp.)
 Malachite-shouldered Green Bulbul—*Chloropsis zosterops* (Vig.)
 Yellow-crowned Bulbul—*Trachycomus ochrocephalus* (Gmel.)
 Vieillot's White-throated Robin—*Planesticus albicollis* (Vieill.)
 Magellan Robin—*Planesticus magellanicus magellanicus* (King)
 Olive Thrush—*Planesticus olivaceus* (Linn.)
 Somali Shrike—*Lanius somalicus* Hartl.
 Woodchat Shrike—*Lanius senator* Linn.
 Formosan Skylark—*Alauda wattersi* Swin.
 Peruvian Saltator—*Saltator striatipectus immaculatus* (Berl. & Stolz.)
 Black Siskin—*Spinus atratus* (d'Orb.)
 Lichtenstein's Desert Finch—*Rhodospiza obsoleta* (Licht.)
 Rüppell's Golden Weaver—*Sitagra galbula* (Rüpp.)
 Striated Weaver—*Ploceus manyar* (Horsf.)
 Wattled Starling—*Creatophora carunculata* (Gmel.)

Slender-billed Glossy Starling—*Cinnamopterus tenuirostris* (Rüpp.)

White-crowned Glossy Starling—*Heteropsar albicapillus* (Blyth.)

Moustached Jay—*Cyanocorax mystacalis* (Geoffr.)

CENSUS OF BIRD DEPARTMENT

January 1, 1928

		Species	Specimens
Rheiformes,	Rheas	1	2
Struthioniformes,	Ostriches	1	1
Casuariiformes,	Cassowaries and Emus....	3	6
Tinamiformes,	Tinamous	3	5
Galliformes,	Quail, Pheasants, etc.....	56	137
Turniciformes,	Hemipodes	2	3
Pteroclidiformes,	Sand Grouse	2	3
Columbiformes,	Pigeons and Doves	59	130
Ralliformes,	Rails and Gallinules.....	13	21
Sphenisciformes,	Penguins	1	2
Lariformes,	Gulls and Terns	15	54
Charadriiformes,	Plovers and Sandpipers....	9	14
Gruiformes,	Cranes, Seriemas, etc.....	13	22
Ardeiformes,	Ibises, Storks and Herons...	29	56
Palamedeiformes,	Screamers	2	3
Phoenicopteriformes,	Flamingoes	1	1
Anseriformes,	Swans, Geese and Ducks...	60	299
Pelecaniformes,	Cormorants, Pelicans, etc...	10	21
Cathartidiformes,	New World Vultures.....	4	4
Accipitriformes,	Old World Vultures, Hawks and Eagles	26	37
Strigiformes,	Owls	14	25
Psittaciformes,	Parrots, etc.	96	204
Coraciiformes,	Kingfishers, Hornbills, etc..	16	28
Cuculiformes,	Cuckoos and Touracos.....	8	14
Scansoriiformes,	Barbets and Toucans.....	13	18
Piciformes,	Woodpeckers	2	2
Passeriformes,	Perching Birds	331	827
		<hr/> 790	<hr/> 1,939

Summary: Orders, 27; Species, 790; Specimens, 1,939

DEPARTMENT OF REPTILES

RAYMOND L. DITMARS, Curator; JOHN TOOMEY, Head Keeper

One of the most important installations in the Park in recent years is the great enclosure for pythons, completed early the past summer. This occupies the center of the Reptile House, is approximately thirty feet long, fifteen feet wide and twenty feet high. It contains two full-sized cedar trees, a bathing pool, and floor of fine white pebbles, like the clean, dried bed of a stream. This cage has attracted much praise and warrants description.

The lower portion, to a height of approximately six feet, is of plate glass, to eliminate all draughts upon the sensitive inmates. Above the glass, rises an almost invisible mesh, forming an arch over the cage. Generally speaking, it is a reduced replica of the great Flying Cage in the northern portion of the Park. The big cedar trees within it are of the horizontally branching, gnarled type, that grow close to rock ledges. They were selected from the wild and undisturbed slope that skirts the westerly side of Boston Road, within the Park. These trees were so large it was necessary to transport them on trucks, then saw them longitudinally in halves, in preparing to bring them through the nine-foot doors of the Reptile House, and even with this treatment a number of the larger boughs had to be temporarily removed. After assembling, the trunks and branches were stained with mossy green to match the damp, gnarled timber of the python country.

The cage now contains two large serpents, one slightly over and the other slightly under twenty feet in length. Both of these pythons have been in the Park a number of years. The graceful gliding of these reptiles from tree to tree is most impressive. Several larger specimens of the great reticulated python are now on the way from the Malay Peninsula.

Another installation started at the close of the year was the Tortoise and Turtle Hall, formed by the remodeling of the spacious lobby of the Reptile House.

During the early fall, the Curator attended a meeting in Philadelphia of a number of specialists interested in the development of serum therapy in relation to treatment of snake bite. Among those associated with the discussions were Dr. Thomas Barbour, Dr. Hans Zinsser, and Dr. William E. Deeks, all of Harvard; Dr. Afranio do Amaral, of the

Brazilian government; Lt. Colonel Siler, Surgeon General's Office at Washington; Dr. Herbert C. Clark, Director of Medical Research, United Fruit Company, and Dr. Howard Kelly, of the American College of Surgeons. At this meeting there was general discussion of the hazard from venomous serpents in the American tropics and the interest of many who go to these areas on prospecting and business trips, to note and study the types of particularly dangerous reptiles. It was suggested that a series of these specimens would be of great practical interest at the zoological gardens at Philadelphia and the Zoological Park, and plans were considered to assist the Curator to obtain reptiles in the Central American region. Several fine series of reptiles were later sent to the Reptile House from the Tela district. These were presented through the courtesy of Dr. Herbert C. Clark.

In building up this tropical collection, it was later decided that the Curator would make a short visit to Tela to film wild specimens of the fer-de-lance and other subjects, observe the methods of extraction of poisons from the venomous serpents at the research station there, and collect additional specimens. This trip will be made early in 1928 and the motion picture material will complete a series showing experiments and studies in extracting venoms from serpents to produce serums. These photographic records now very fully cover the poisonous snakes of the United States and the rounding up of the material with the tropical types will add much interest. The Reptile Department has long been the headquarters for a broad correspondence on serum matters and the gratuitous distribution of the serum itself. There have also been numerous calls for lectures on the subject, before medical bodies, hence the completion of these photographic records is of considerable importance.

A census of the Reptile Department shows the number of species and specimens at the close of 1927:

	<i>Species</i>	<i>Specimens</i>
Turtles and Tortoises (<i>Chelonia</i>)	22	120
Serpents (<i>Ophidia</i>)	47	174
Lizards (<i>Lacertilia</i>)	8	21
Crocodilians (<i>Crocodilia</i>)	3	43
Amphibians	6	19
Total	86	377

A census of the animals in the Zoological Park, taken January 1, 1928, is as follows:

	<i>Species</i>	<i>Specimens</i>
Mammals	193	545
Birds	790	1,939
Reptiles and Amphibians	86	377
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Total	1,069	2,861

REPORT OF THE VETERINARIAN

By CHARLES V. NOBACK, D.V.M., Ph.D.

The health of the animal collection has been maintained at its usual high standard during the past year. This condition is in no small measure the result of efficient care and interest on the part of those in charge of the animals.

Three valuable specimens were lost during the past year. One was an eight-months-old giraffe which died as the result of an accidental fracture of the skull. The other two were a young mountain zebra and a Siberian tiger, both of which succumbed to an attack of pneumonia.

One hundred eighty-one mammals died during the year, with most of the losses occurring among the new arrivals, particularly the smaller monkeys and mammals. A number of these were brought to the Park after they had failed to succeed as apartment pets. Old age and accidents were the causes of death in a number of cases. There was no serious outbreak of a contagious or infectious disease.

Infectious Diseases. Gastro-enteritis is frequently found on autopsy in a number of the small carnivora, especially among the new arrivals. It seems probable that a number of these cases may be due to infection with micro-organisms of the colon-paratyphoid-dysentery group. Micro-organisms belonging to this group of bacteria have been isolated from animals at the London Zoological Garden as well as from animals in continental zoological gardens.

Pneumonia is found to be an important cause of death especially among the sea-lions, but the cases are sporadic in character. Twelve South American monkeys died from pneumonia during the latter part

of the summer. This seemed to be due to some infection but the condition cleared up before a bacteriological investigation could be made.

Kangaroo disease (necrosis of the jaw and adjoining sinuses) was present in two of five specimens which died in this group of marsupials.

Tuberculosis was found in two animals, one a gibbon and the other a white-lipped peccary. These animals were in widely separated parts of the Park and had been kept in individual cages. Thorough cleansing and disinfection of the cages of these animals was carried out in order to eliminate any possible centers of infection.

The case of a Drill (*Cynocephalus leucophaeus*) presenting unusual nervous symptoms with an apparent recovery was described in last year's report. This animal began to present similar symptoms eight months later, the most prominent of which were drooping of the left eyelid (ptosis) and a paralysis of the limbs. Dr. Frederick Tilney was called in consultation and became interested in this (neurological) case. A bacteriological culture of the spinal fluid revealed the presence of a streptococcus viridans. It is expected to make a more detailed report of this case in a special article. The Drill died and was found to have been suffering from an abscess of the mid-brain and an abscess of the liver.

The low incidence of infectious disease at the Park is due primarily to a strict quarantine of all new specimens and to the carrying out of instructions for thorough cleansing and disinfection of the animal quarters at all times.

Parasitic Diseases. Two common red foxes were found to be infested with hookworms (*Ancylostoma*) while under observation in quarantine. As their condition was poor they were humanely disposed of in order to prevent the probability of infesting the fox collection.

A few intestinal worms (ascarids) are found at times but in very small numbers. Maintenance of cleanliness in the cages of animal quarters has kept the incidence of diseases caused by intestinal parasites down to a minimum.

Accidents. Losses through accidents are almost inevitable among captive wild animals. The following are among the animals lost through this cause during the year, i.e., two mouflon, three tahr, a number of monkeys and several deer. As mentioned previously, the death of a

young giraffe was the most severe loss resulting from an accidental fracture of the skull.

Old Age. A considerable number of the specimens at the Park live to a real ripe old age. The following are some of the animals humanely disposed of on account of changes brought about by extreme age: an old gray wolf over twenty years of age, an Island kangaroo, a palm cat, a number of deer which had been born and raised in the Park, and three sapajou monkeys. There were several other specimens which died from a terminal pneumonia brought on by old age.

Inadequate Adaptation. There has been a limited loss through disease resulting from the inability of new animals to adapt themselves to the conditions of captivity. These losses have been confined almost exclusively to the small mammal group.

Among others, the following conditions have been grouped under the general term of "cage paralysis," i.e., rickets, osteomalacia or osteoporosis. Preliminary clinical observations have been made during the year in studying the effect of radiant energy applied in the form of ultra-violet light upon selected cases of "cage paralysis" in some of the primates. The ultra-violet rays have been obtained from a quartz vacuum tube containing mercury and the proper electrodes for the passage of an electric current. Several primates, including a red howling monkey, three lemurs, and a green monkey, with symptoms of so-called "cage paralysis" responded favorably to direct ultra-violet irradiation. They did not show any definite signs of improvement before the second or third week of the treatment but improvement was rapid during the fourth week. These results suggest that there seems to be a form of cage paralysis which resembles experimental rickets. Further work will be carried on to determine this point more definitely as opportunity permits.

It has been demonstrated by Hess, Steenbock and others that the beneficial effects of ultra-violet light may be stored up in sterols (ergosterol) present in food through irradiation. In order to take advantage of this procedure, irradiated whole dried milk is being used in feeding the primates and some of the small mammals. Cod liver oil has been used on account of its "antirachitic" effect but some of the primates and smaller animals refuse to take it. Irradiated dried milk is therefore being tried in place of the oil. It may be of interest to note in passing

that in writing of the red howler monkey Lydekker states that "The food of these monkeys is said to consist entirely of leaves" (Lydekker, *The Royal Natural History*, Vol. 1, London, Frederick Warne & Co., 1893. p. 183). It is known that the energy of ultra-violet rays in sunlight may be stored in the phytosterols (ergosterol) of leaves and thus impart "antirachitic" properties to them. One of the monkeys treated (the red howler) lives almost exclusively on fresh green leaves during the late spring, summer and early fall, but apparently did not receive an adequate amount during the winter months when he presented symptoms of "cage paralysis."

An ultra-violet lamp has also been installed in the Large Bird House. A yellow-crested white cockatoo was affected with "leg weakness" and was unable to move about, a condition similar to that found in young chickens, which respond favorably to ultra-violet irradiation. The cockatoo received daily irradiations for more than five weeks with the result that it completely recovered the use of its legs and was apparently benefitted by the light. The reaction of birds toward the light is interesting. They seem to enjoy the "artificial sunlight" as they flit about and preen themselves in its rays.

A small delicate hummingbird which did not seem very strong on arrival appeared to be benefitted by daily irradiations.

The lamp is kept at a distance of five to six feet away from the birds when irradiating. The time of exposure is from fifteen to thirty minutes daily. It seems reasonable to expect beneficial effects from the use of this light with birds, especially in the late fall, winter and early spring.

Irradiation was tried in the treatment of a red bird of paradise which had difficulty in moulting. It seemed to be benefitted by the treatment.

Hospital. The facilities at the animal hospital in the Park have been improved through the installation of new equipment for carrying on the work of diagnosis, treatment and study of disease as it may appear among the animals. This additional equipment includes a new gas range, a bacteriological incubator, an autoclave, centrifuge and colorimeter. This equipment together with required reagents will aid in carrying out bacteriological and biochemical diagnostic tests.

This Department has cooperated with scientific workers during the year by furnishing them with normal and pathological material for investigation and research.

The following scientific men, Dr. Frederick Tilney, Professor of Neurology at Columbia University; Dr. Alfred F. Hess, Professor of Pediatrics of Columbia University, and Dr. L. T. Le Wald, Professor of Roentgenology at New York University, have gratuitously given of their time and services when consulted regarding some of the problems at the Park. Appreciation of the advice and counsel of the Director and the cooperation of the officials is hereby acknowledged.

DEPARTMENT OF ADMINISTRATION

H. R. MITCHELL, Chief Clerk and Manager of Privileges
WILLIAM MITCHELL, *Cashier*

The sum granted by the Board of Estimate for the maintenance of the Zoological Park during the year 1927 was \$277,280, an increase of \$3,000 over their allowance for the previous year. To this amount, we were obliged to ask the Zoological Society to add from their own funds an amount not exceeding \$66,000, making a total for maintenance purposes for the year of \$343,280.

Just before the close of the year we made application to the Board of Estimate for the transfer of \$1,200 from Salaries Account to Forage and Veterinary Supplies, which request was very kindly granted.

Unexpended balances in various city codes, amounting to \$424.81, reverted to the City at the end of the year, and the Society's contribution we were able to reduce to \$61,968.22, which made the total cost of the maintenance of the Park for the year \$338,823.41.

In our Budget for the year 1928, the City has granted an increase of \$30,000 in the maintenance appropriation, bringing the total up to \$307,280. However, a considerable portion of the increase is to cover the cost of a new roof to the Reptile House, which is in urgent need of replacement.

The 1928 appropriation was granted in a single line budget which will be of great assistance in effecting transfers between the various maintenance accounts.

Re-opening of Bronxdale Entrance: The completion of the new bridge on Boston Road, across the Bronx River at the north end of

Bronx Lake, and the rapid development of the section lying north and east of the Park along Boston Road and Pelham Parkway, made it desirable to re-open the Bronxdale Entrance at the north-east corner of the Park.

Application was made in the Budget for the year 1928, for an additional gateman for this entrance, which was granted.

Repairs to the building, and grading about the entrance and entrance plaza, were carried on during the latter part of the year, and the gate was opened to visitors on January 1, 1928.

Traffic to the city via Boston Road is increasing rapidly and it is expected that many visitors will reach the Park through this entrance, after they become familiar with the beauty of the walk along the bank of the river, and past the falls at the east end of Lake Agassiz.

Park attendance in 1927 exceeded that of any previous year since the opening of the Park, reaching a total of 2,750,704, an increase of 419,283 over 1926, and 178,654 over the greatest attendance in any previous year. The total number visiting the Park since its opening in November, 1899, to January 1, 1928, was 48,535,744. The largest attendance on any single day for the year, was 58,794 on May 30. The record day's attendance of 75,802 on June 15, 1924, still stands.

During the year a small automatic refrigerating machine was installed to operate two refrigeration rooms for the storage of beef and other perishable supplies in connection with the maintenance cook room. This was a much needed improvement which is effecting a saving in the storage and handling of such supplies. The old outside ice boxes previously used for the purpose were demolished.

Receipts from the sale of animals during 1927, amounted to \$6,550, which sum was credited direct to the animal account, making the net expenditures for additions to the collections \$21,089.22, including expenditures from the Cadwalader Annual Endowment Account.

Under Scientific and Research Fund, one new account was established late in the year, with the title of Galapagos Tortoise Account, for the purpose of receiving subscriptions toward the expense of Dr. Townsend's trip planned for the coming year.

The regular quarterly audit of accounts was conducted by Peat, Marwick, Mitchell and Company, and Certificate of Audit and Audit Committee's report will appear following the Treasurer's statement.

Privileges: The net profits in privilege operations, as a whole, fell somewhat short of the previous year, although attendance and gross business showed an increase. This was due to several causes, chief of which was a considerable reduction in the profit on the Guide Book, and in the soda water division, as explained in detail elsewhere under these items, and an advance in the salaries of all employees of this department, which was put into effect at the beginning of the season.

Most of the regular permanent privilege employees have been in our employ some years, and take a genuine interest in the service this department endeavors to render to Park visitors. We were very glad to make the adjustment of salaries effective the first of the season, which was done without solicitation on the part of the employees. The total reduction in profits in privileges for the season was just about equal to the amount required for the advances in salaries for the year.

Considerable work in the nature of repairs and improvements of a permanent nature was carried on by privilege employees as it could be done without interfering with the regular daily service labor. Among the most important was painting the exterior, and putting up and painting interior work in open dining pavilion at Rocking Stone Restaurant, also painting Boat House exterior, including all surrounding fences and railings.

For some time we have had in our general plan for privilege improvement, the construction of a new Refreshment Pavilion to replace the old structure near the bear dens. After considerable study of this location in relation to other improvements contemplated by the Director, it was found desirable to seek another location for the new stand. A number were considered, and the site finally selected was on the east side of the main walk from the Boston Road Entrance, about half way between the entrance and the buffalo barn. This location adjoins the western side of the new parking space near the south end. The front of the building is about twenty-five feet from the walk, which at this point, will widen to a plaza approaching the building and extend beyond and around each end.

The preparation of plans was begun as soon as the location was decided upon. Our architect, Frank M. Wright, 100 East 45th Street, New York City, submitted a classical Romanesque design, which met with the approval of the Director and the Executive Committee, after which it was formally submitted to, and received the approval of the Commissioner of Parks for the Borough of the Bronx, and the Municipal Art Commission.

It was found difficult to obtain estimates for the construction of the building that would come within the sum authorized, but after long delays and some slight modifications in some of the materials, the contract was let to H. H. Vought and Company, Grand Central Terminal Building, New York City, who have been satisfactory general contractors on several different buildings previously erected in the Park.

The excavation was commenced about the middle of November and work has been carried on since, as weather permits. While it is expected that weather conditions will make it difficult to carry the work on constantly during the winter, it is hoped that construction will be completed so as to have the building in operation for a part of the coming season. Every effort is being made to push it to completion, so as to take advantage of as much of the season of 1928 as possible.

The new building is approximately 40 feet by 70 feet, one story in front and two stories in the rear, toward the parking space and Boston Road. It is attractive in design, and will be built of brick with cast stone trim, and a hand made tile roof. We believe that it will compare favorably in materials, construction and design with any Park building elsewhere erected for a similar purpose.

A regular soda fountain service is proposed, as it is thought unwise to infringe in any way on the restaurant service maintained at both the Rockingstone and Boat House Restaurants.

It is also proposed to maintain at one end of the public space in this building a Bureau of Information, where full information can be furnished regarding the Park and its collection, and where various publications of the Zoological Society will be available for those interested.

Parking Space: The proposed plan for a Parking Space for automobiles in the lower portion of the Park lying just west of the Boston Road and south of the Buffalo entrance, was formally approved by the

Executive Committee during 1927, and the work of filling in to raise the grading was carried on during the latter part of the year, as suitable fill was obtainable without expense. Fairly good progress was made and the rough grading will no doubt be fully completed before the close of the winter.

While the parking plan is still somewhat indefinite as to details, it is expected that it will be controlled from the Buffalo entrance to aid in reducing operating expenses. The ramp at the south end of the entrance will give access and egress. Parking will be at an angle on either side of an oblong circular drive, with traffic one way. In this manner parking and pulling out into traffic can be done rapidly, with a minimum of danger and delay.

We anticipate some trouble with flooding over this area during and following storms, as the original sewer outlet for almost the entire Park, which passes through this lower section has been for some years, inadequate to handle the increasing drainage. A plan for a larger outlet was prepared by Mr. Renner during the first half of the year, and a request for the funds to carry on the work, at a cost of somewhat less than \$10,000, was included in the Budget request for the year 1928. Unfortunately the funds for this improvement were not granted in the Budget as allowed, and it probably will be necessary to make special application for funds for this purpose.

Rockingstone Restaurant: A very substantial increase in gross business was shown at the Restaurant over the previous year, and the net results made a very satisfactory proportional gain.

Some decorating and painting of a very inexpensive nature, that could be carried on by Privilege employes, was done in the open pavilion, which added very much to its attractiveness, and was favorably reflected in additional patronage.

A number of further improvements are badly needed in the nature of kitchen equipment and improvements, which it is hoped can be carried on in the very near future.

We have as yet been unable to carry out plans for a modification of planting about the building, where the original planting has grown too large, but it is hoped that this can be done during the coming spring. A very small amount of labor and expense in this direction would make a great improvement in the setting and the outlook, both of which are

important in connection with a location such as the Rockingstone Restaurant commands.

The north pavilion of the Restaurant is in more or less of a dilapidated condition, which detracts from the appearance of the building, as visitors approach it from the Polar bear dens. While no extensive repairs can be made to this pavilion at the present time, it is proposed to remove the old steps and give that part of the building a coat of paint early next season to make some improvement in its appearance.

Boating: This branch of the Privileges would have made an excellent showing for the year, except for the extensive damage done to our fleet of row boats caused by one of the heavy floods late last summer, which reached such proportions as to break all of our safety cables, and carry about 150 of our steel row boats over the falls and down the Bronx River, some of them reaching the Sound.

A strenuous effort was made to salvage them, and the greater number were recovered, but the damages were extensive and repairs have been going on steadily ever since. As a result, we were obliged to place an order for two carloads of Mullins steel row boats, for delivery in the early part of next season, in order to bring our fleet up to approximately its normal number. With the thorough overhauling and rebuilding of the salvaged boats, and the new equipment, we expect to open next season fully prepared to take proper care of the demands made upon us.

During the storm which caused this damage, we had the highest water ever experienced on Bronx Lake since the Park was opened.

The expenses of operation and up-keep on the electric launches had increased so greatly during the past few years, that it was decided to make an advance in the fare for the trip to Bronxdale landing and return from ten to fifteen cents. The rate of ten cents was established some twenty years ago, when operation was begun, and when repairs and operating expenses were less than half the present cost.

After this change in rate, there was for a time, some falling off in the number of persons carried, but before the end of the season, the number of passengers being handled was practically back to normal figures.

Boat House Restaurant: This privilege continues to be our most difficult operation. We were unable to make a showing equal to the pre-

vious year, due to the unseasonable weather prevailing most of the summer months, and the fact that we assumed necessary expenses that had not previously been carried in this account.

The increasing traffic on Boston Road since the opening of the new bridge in May did not gain sufficiently to have any appreciable effect on this year's business, as we had hoped it would.

Soda Water: This division of the Privileges suffered severely from the very unusual summer weather that we experienced this season. While we had, as mentioned elsewhere, a splendid increase in attendance for the year, a considerable portion of this increase came before and after the soda water season. In addition, we had a large number of rainy Sundays and much unseasonable weather in some of the best months of the soda water season, when this class of business should be heaviest.

There was also some falling off in gross business due to the closing of the old stand near the bear dens, which was demolished early in the season. As this business is handled on a close margin of profit, any reduction in volume of business is seriously reflected in the net profits.

Unseasonable weather in mid-summer which naturally reduced the volume of soda water business, had the opposite effect on candy sales, stocks of which are carried at all soda stands, which helped out the situation to some extent. Gross sales for the season on this item, increased nearly 20 per cent.

Gate Receipts: The total collected for paid admissions to the Park during the year, amounted to \$19,796.75, an increase of \$962.30 over the year 1926. These collections were remitted direct to the improvement and repair account, and added to the balance of \$332.06 on hand in this account at the beginning of the year made a total of \$20,128.81 available for carrying on the improvement and repair program of 1927. Expenditures were \$18,960.48, which left a balance of \$1,168.33 carried forward to the year 1928.

There was some further consideration of the proposal to advance the rate of admission, but no definite conclusion was reached.

Guide Book: During the latter part of 1926, Dr. Hornaday completed a thorough revision and re-writing of the Guide Book. Just as the manuscript was ready for the selection of new photographs for illustrations, Mr. Sanborn met with a serious accident, due to an explo-

sion of chemicals, while at work in his dark room, which kept him in the hospital for some weeks, and was the cause of delay in getting the new edition under way.

The result was that for some time we were entirely out of Guide Books, and sales for the year were nearly \$2,000 under 1926. The new edition with entirely new illustrations and new plates, of course involved additional expense in production, so that the net profits were much less than on previous issues, and the net result for the year showed a reduction of nearly \$1,500 on this item.

This new edition, which is known as the Quarter Century Edition, we feel is worth all the delays and loss in profits referred to above. Acknowledgment by the Society, has been made elsewhere to Dr. Hornaday for his thorough and painstaking revision.

The new guide book is so excellent in all respects that the Society decided to run a special cloth bound edition to be known as The President's Edition, to be used as a gift guide book to distinguished visitors.

The guide book is selling at a rate that leaves no doubt of its popularity with the public, and the favorable and enthusiastic comments from purchasers is encouraging to all who contributed in any way toward its production.

Miscellaneous Publications: Sales of miscellaneous publications, which include all publications except the Guide Book, which is carried in the Privilege account, increased substantially over the previous year.

A new series of postal cards was printed, consisting of nearly a million and a half cards, as well as a 10,000 edition of Art Stamp Albums and 7,500 copies of the Panorama.

The sales of all scientific publications, annual reports and Bulletin sales and subscriptions are not included in the Privilege accounts, but are credited direct to the account to which their costs have been charged.

Riding Animals: A change was made in the immediate management of this branch of the Privileges during the past season.

William Cully, who had been employed in the Park service for several years as a boy, and later had charge of the motor chairs, where he displayed energy and ability, was engaged to take charge of the riding animals, and assumed the duties on May 15, 1927.

Considering the difficulties of re-organizing the work during the busy season of the year, an excellent showing was made. Discipline was very greatly improved among the boys in charge of the ponies. Receipts showed a substantial increase, and there was a corresponding increase in net profits.

Accidents and complaints were almost entirely eliminated. Animals and the equipment were in excellent condition at the close of the year.

Some temporary alterations were made in the quarters for the ponies. The corrals at the old ball ground were rebuilt and the riding camels were put on exhibition for the winter months in an empty stall in the antelope house, all of which added materially to the comfort of the animals.

Baby Carriages: Receipts from the rental of Baby Carriages showed a moderate increase over 1926. The gross receipts from this source for the past year was in excess of \$2,000, although the charge made is nominal, which indicates a real need for this service. The use of carriages by about 8,000 patrons during the season is indicated.

The equipment requires extensive repairs, and the addition of several dozen new carriages of a plain design and the strongest construction obtainable. Negotiations were under way at the close of the year, and it is hoped that the number needed can be added in the early part of the season.

As usual, we will carry on the much needed general repairs to this equipment during the winter months.

DEPARTMENT OF FORESTRY AND CONSTRUCTION

CHARLES J. RENNER, Chief Constructor and Engineer; FRED W. MINGST, Assistant Constructor; MICHAEL E. O'KEEFE, Assistant Forester;
GEORGE SKENE, Head Gardener

The maintenance of the Park during the past year consisted of the usual routine work of repairing and replacing those things which were urgently needed and most necessary. Though a great deal of work was done by each department and its effect is noticeable and beneficial throughout the Park, there still remains much more to be done, which, by virtue of the steady and uninterrupted progress of our men and the

assistance and support given to us by the other departments and officers of the Park, we shall eventually complete.

A portion of the maintenance work is really outright replacement, which has come about through rust and erosion; certain materials of the walks, buildings, cages and many miscellaneous objects and structures having become brittle, decayed or worn out at various points. The major portion of the Park appurtenances, however, are in good shape due to their constant care, but with the passing of each year it is well to remember that increasing sums will be necessary to prevent ragged and depleted appearances.

The trees and shrubs are also subject to the forces of nature and in addition, being living things, constantly growing older, require much attention. In an increasing number of cases it is necessary to replace them entirely because of death and of growth beyond what was originally intended; the latter causing obscurity of the object which the shrub or trees are supposed to embellish. Thanks to the foresight of the former superintendent, Mr. Merkel, and the Nurseryman, Mr. Svoboda, the Park is in possession each year of many fine specimens of evergreens and other small tree stock available for this purpose.

Another source of replacement work in the Park is due to vandalism, which we regret exists as a steady nuisance in spite of the combined efforts of all entrusted to stop it. Unnecessary litter and papers make much work, but our small animal friends, the squirrels, and our much appreciated paper-picker laborers, together rapidly clear away the same and bring the Park back to its pleasing and restful state.

On the whole, the Park force did well during the year. Besides the operating work, such as hauling and handling feed, ash removal, Park cleaning, etc., and the general routine work of grass cutting, pruning and small repairs, 1,170 square yards of tar walks were constructed, 11,800 square yards of tar walks were resurfaced, 6,710 lineal feet of fence were replaced or rebuilt, 60,000 lineal feet of guard wires were replaced and the posts repaired.

The Large Bird House interior, the West Farms and the Bronx-dale Entrances, the Primate and Lion House outside cages, the Service Building, the Pheasants' Aviary cages, several toilets and the new paint shop were renovated. The plot on the west side of the Bronx River, south of the boat house, and the plot left low in front of the Bronx-dale

Entrance were both filled in and graded. Soda Stand No. 3 at the Bear Dens, was removed and a small plaza built.

A large cage for the pythons and an exhibiting space for tortoises and turtles were constructed within the Reptile House. A rabbit house at the Nursery, a series of new pony stalls in the barn, a worm-gear to operate the three-ton door in the elephant stall, new railings at the outside turtle run and within the Heads and Horns Museum, and a Vita Glass room, were also constructed.

The paint shop, woodcutters' shed and one small deer shelter were re-roofed, while the Lunch Pavilion, Rocking Stone Restaurant and the front of the Mammal House were furnished with new copper gutters.

A new boiler was installed in the Primate House.

The Antelope House was connected to 182d Street with a new water main. This was done in co-operation with the New York City Water Department, which made the service connection and laid the main as far as the property line, whence it was continued by the Park forces to the Antelope House. As was to be expected, the increased pressure was too much for the house lines, which had become eroded and had to be replaced.

A fire plug was installed near the Reptile House and Service Buildings.

About thirty dead trees in the woods were removed and ten new bought trees were planted. In the woods many young trees are coming up of their own accord so that at such places it is not necessary to plant anew. However, the Park has assumed a policy of transferring young trees each year to the Nursery for care and later use, and this, it is hoped, will eventually reduce outside purchases to a minimum.

Along the shores of Lake Aggasiz and on the islands were planted two varieties of willows (*Salix vitellino*, *Salix caprea*) and two varieties of dogwood (*Cornus stolonifera aurea* and *Cornus sanguinea*) all of which were furnished from our Nursery stock.

In the Italian Garden about fifty full, perfect sized shrubs of *Juniperus argentea*, *Retinispora plumosa*, *Retinispora plumosa aurea*, *Retinispora flifera aurea*, *Taxus canadensis*, *Taxus baccata*, *Biota occidentalis*, *Bitia globosa*, were planted, replacing a similar number that had become overgrown and misshapen. The Nursery also furnished 6,300 yellow

pansies and 1,100 begonias for centers, 1,600 salvias, some scarlet cannas and 950 abutilon plants for borders.

At the Boat House Restaurant many overgrown bushes and shrubs were removed, once more revealing the building in its original lines. During the coming spring new shrubs will be planted, bringing the situation back to its original picture.

A new parking space was laid out to co-ordinate with a new pavilion project. Both are progressing rapidly and should be finished during the coming season.

The Department takes pleasure in acknowledging herewith its appreciation of the assistance received from the New York Association for the Improvement of the Condition of the Poor. This Society sent men here who were used in various occupations and though many of them were ill, nevertheless, their work did much to maintain the cleanliness and good appearance of the park, besides saving our men for the more important tasks.

DEPARTMENT OF PHOTOGRAPHY AND PUBLICATION

ELWIN R. SANBORN, Editor and Photographer; ANNIE R. NEWMAN, Assistant;
EDWARD R. OSTERNDORFF, Assistant Photographer.

Photography: As convincing testimony, a good picture is worth a book-full of words; a flood of language may be eloquent and expressive, but a photograph leaves nothing to the imagination; ocular proof, as Dr. Hornaday was in the habit of expressing it, is final and conclusive.

During the construction of a section of the Bear Dens a difference occurred between the Society and the Contractors concerning the state of development of the work at a definite period; money and prestige were involved and a law suit hovered over.

As it happened, a series of photographs had been made of the work in various stages, and these had been carefully calendared with specific dates.

When this array of photographs was presented by the Society, it settled the case right there.

Animals come and animals go as do all things materialistic; a photograph, however, like the famous "brook" of Tennyson goes on forever; it is something tangible; a mute orator of untold eloquence.

Once upon a time the Park collections included a Carolina parakeet; rare even then, it was one of the former thousands that gathered in flocks along the Eastern coastal regions of the United States as far north as the Great Lakes.

At this time not one of the thousands is left alive, and this picture in the Society's series probably is the only authentic photographic record of this bird in existence.

We published a few years ago an article in *Zoologica* by an eminent Australian scientist, W. H. D. Le Souef, illustrated with photographs from the Society's collections and also a number furnished by the author.

Included among the author's collection was a single picture of the rare and curious platypus; and I think he wrote that he regretted his inability to get more or even one that he could pronounce good. This incident is more a matter of wonder when it is realized that the picture was made in Australia the sole habitat of the platypus, an animal so amazing in anatomical structure that it is the wonder of the scientific world.

Sometime later, the Society published an article about a platypus which was exhibited alive, at the Park, for a period, illustrated with a series of photographs which at that time in pictorial variety far excelled any other collection in the world.

To recount the various new mediums that eventually used that material would produce not only an astonishing total number of publications, but an area of broadcasting of words and pictures that would embrace the entire civilized world.

It is said that the camera does not lie; this is true in the physical sense that it records the forms and positions of objects as they may exist; but it is a gay deceiver in the rendering of the tonal values of the objects.

A sheep on a high rocky ledge may be in clear relief from the background to ordinary vision, and a photograph of the same object will so effectually equalize the tone values as to occasion the remark "what a wonderful protective coloration."

An artist criticized a photograph of his painting as not properly recording many of the subtler shades of color in his picture.

This was true! The plate had rendered the tones of his picture in correct values, but in the monochrome of the photograph, delicate shades of blue, pink, green and yellow were all the same tone of gray or so nearly the same as to seem identical.

The photograph of the Carolina parakeet served a useful purpose in that it represented the form of the bird; but it might as a picture appear exactly like other parakeets of even different colors or shades which when photographed would be of the same tone value as the former.

Many of the gorgeously colored parrots, parakeets, birds of paradise and other species in which the color is a vitally distinguishing feature might be almost worthless in an ordinary photograph, unless they were of such striking anatomical structure as to subordinate color-pattern to form.

A photograph of the greater bird of paradise in the Society's collections gives a very fair idea of its beauty of form and grace of plumage, but is utterly inadequate in its representation of the warm tones of brown, gold and cream of its glorious color scheme.

To even properly record the relative values of these colors in a photograph it would be necessary to use color filters which would so prolong the exposure as to preclude all possibility of making a sharply detailed negative; the living bird does not stay put for half seconds; if it sits even for the fiftieth part of a second it is remarkable.

Photographs of small mammals and birds must be made instantaneously, and if the colors and patterns are in close harmony or are classed among the tones of the red end of the spectrum the results are form only; and if the operator is very lucky he may get a photograph of the form.

The Society's photographs at the Aquarium have been developed gradually by persistent, logical efforts along definite lines, by proper use of the mechanics of photographic apparatus.

The fishes cruising in the tanks with alluring backgrounds of rockwork represented a picture in which the solution solely was the proper photographic light-source and its control.

The most logical idea which presented itself was that the source of light was above and naturally was driven downward into the water;

when this proved to be inadequate it was supplemented with an artificial medium—burning magnesium.

Repeated experiments developed a method of illumination with quick-burning flash powders, automatically controlled by electric current which released the shutter of the camera at the same moment.

Exposures of very brief intervals were possible, and, of greater importance, the light medium produced negatives of correct color value; this latter characteristic of the light is of inestimable value at the Aquarium because of the depths of tones of the rockwork and the varied color pattern of the fishes.

These exposures can be controlled with almost mathematical precision, the light may be diffused or concentrated, and, in fact it can be directed practically with the same accuracy as the light of arc lamps and incandescent bulbs.

The light from burning magnesium powder—with the necessary chemicals to produce combustion—such as the potashes which give off their oxygen freely, cannot be excelled as a light-medium, and it is reasonable to assert that as a method of illumination, at least for this purpose, cannot be equalled. So accurately can these exposures be regulated that by using a definite weight of powder, the character of the resulting negative can be predetermined.

Great progress has been made in the manufacture of plates for direct color photography, and with the magnesium powder as a light medium, exposures can be given of such speed as to assure not only sharpness of detail but reproductions in color. There are several color plate methods which produce a direct positive on a glass support; and other methods by which a positive on paper can be produced; this latter process, however, requires great technical skill to yield perfect results.

The methods by which color prints on paper are produced require three different negatives which must be taken of the object in identically the same position; unless the subject can be made to sit while this is done the ultimate result will be problematical if not in peril; it is safe to say that fish or birds will not answer as subjects.

The three-color plate is applicable at present only to inanimate objects; or at least subjects that can be made to sit; but success with the direct color method is very certain.

Almost every photograph of a wild animal has a story concealed within it, and if the photograph has been intelligently made, it needs but a trifling caption to set it forth or reveal an interesting bit of natural history.

How many persons observing an elephant stepping along, make a note of his peculiar slouching gait or how the tremendous bulk of his body is carried so easily without crushing his legs.

He has natural "shock absorbers" in each ankle, and as he puts his feet down, these get into action and gradually closing together absorb in their mechanics the huge weight of his body; and that is exactly the reason why the elephant can move around so lightly and swiftly.

The wisdom of the Society and Dr. Hornaday in developing and promoting photographic work is manifest both by the records that have been made, and in the demand upon this resource by almost the entire world. The Society desires to be an educational factor for the dissemination of knowledge of wild life, and this material is now a very solid and substantial nucleus for that purpose.

If it were possible, a structure should be designed and erected not only to store the collection of negatives and publications, but to provide the most perfect photographic plant in the world.

A plant equipped with every facility for making records of rare specimens in the most direct manner possible and with the assurance of the greatest measure of photographic success and perfection.

Countless rare specimens arrive at the Park and are immediately quartered for exhibition purposes in surroundings, where, if photographs are at all possible, the work is so involved as to require not only endless labor but the production of an indifferent result in the end.

We have one photograph of a white-handed gibbon which was made where the animal was exhibited in the Primate House. The photograph was taken under the most adverse conditions of cramped working quarters and tedious delays awaiting the animal's frightened reluctance to come down out of the roof.

If the gibbon on arrival had been liberated in a suitable amphitheatre, properly lighted, fifty different photographs of this agile jungle acrobat could have been made in the same time; and such photographs; for whoever heard of photographing a gibbon in the wilderness.

The statements regarding the photography in this report are not at all awesome—in fact compared with results that we have seen, they are quite simple.

To accomplish a great deal in animal photography means pursuing the work steadily; it is not always possible in one day to make a great variety or number of pictures.

Thus far the work has been divided between publications and pictures; devoting a portion to photography and the balance to printers and printing. There is a great field of work in photographing the smaller mammals and birds as yet wholly open and it is to arouse the interest of the Society to the possibilities of such pictures that we have written at such length.

The experiences of twenty-five years are so filled with conclusive evidence of the almost limitless opportunities and the sureness of methods that this report is written with neither reservations nor doubts.

Bulletin: The BULLETIN is still a problem; but my intercourse with editors at large assure me that any publication not only is a problem but a menace to the peace of mind of its editor. By the adoption of the plan of an illustrated supplement, the BULLETIN has at least arrived at the stage of a style of its own, of some individuality. The six numbers published in 1927 constitute an important addition to zoology as well as popularized natural history. The supplements of the various groups represent the best of such material yet compiled; the issues for the year numbering 216 pages and 272 illustrations.

Zoologica: During the year of 1927 the following papers were issued: ZOOLOGICA: Volume 9, No. 1, The Marine Fishes of New York and New England, by J. T. Nichols and C. M. Breder, Jr., 192 pages, 263 figures; Vol. 8, No. 4, Galapagos Bachyura, by Lee Boone, 162 pages, 66 figures; Vol. 8, No. 5, Contributions to the Embrology of the American Eel, by Marie Poland Fish, 36 pages, 14 figures; Vol. 9, No. 2, Inquilinism by E. W. Gudger, 8 pages, 2 figures; Vol. 9, No. 3, Frog Tagging, by C. M. Breder, Jr., 30 pages, 12 figures; Vol. 9, No. 4, Turtle Trailing, by Ruth Bernice Breder, 14 pages, 7 figures; Vol. 9, No. 5, Functions and Morphology, by Albert Eide Parr, 26 pages, 9 figures; Vol. 9, No. 6, The Uruguayan Fur Seal Islands, by Hugh M. Smith, 24 pages, 7 figures; Indices for volumes 4, 5 and 6.

Zoopathologica: Vol. 1, No. 8, A New Ectoparasitic Trematode, by G. A. MacCallum, M. D.

Mailing: Above forty thousand pieces of mail were sent out in 1927; the BULLETIN making over one-half of these figures. The cost of postage for the publications is now of such proportions that we have found it necessary to develop another plan to care for this item. The total sum spent for postage during 1927 on the BULLETIN, ZOOLOGICA and the ANNUAL REPORT was nearly \$1,000.

Many similar institutions avail themselves of 2nd Class postage rates in the distribution of their scientific papers and documents, and it is with this idea in mind that a method for including the publications of the Society in this postage-class is being prepared for the approval of the Society. This plan is to include the BULLETIN, ZOOLOGICA and the ANNUAL REPORT.

Reserve Publications: The reserve publications of the Society are accumulating to the point where they will shortly need a larger storage space; the large basement room in the Administration Building having nearly approached the maximum of containment.

Publicity: During the years of 1926 and 1927, a collection of the Society's photographs was exhibited at all of the State and National Conventions of the photographers of the United States and Canada.

Through the Eastman Kodak Co., a series of our pictures was enlarged and bound in album form and displayed by them at the various conventions of photographic societies. It is important to remember that through the efforts of the Eastman Co., photography has been advanced in the past few years to the plane of an art, and that in consequence the calibre of the men engaged in this work has been correspondingly advanced.

These exhibitions were attended not only by photographers in convention, but by their friends and other guests, who may be numbered among the most substantial men of our country.

In accordance with the plan of the conventions, each photographer's work was displayed for one day, but so many requests were made to the Eastman Co., by visitors at the conventions to see the Society's album, that it was the only one exhibited continuously at each meeting. In

connection with this exhibit, the Eastman Co. have decided to extend this exhibit to other countries.

They will augment the collection of photographs of the Park with a series of pictures from the Aquarium. When this is completed the two series of pictures are to be exhibited in every large city of the Old World finally arriving in Australia.

Following is a detailed list of photographic work:

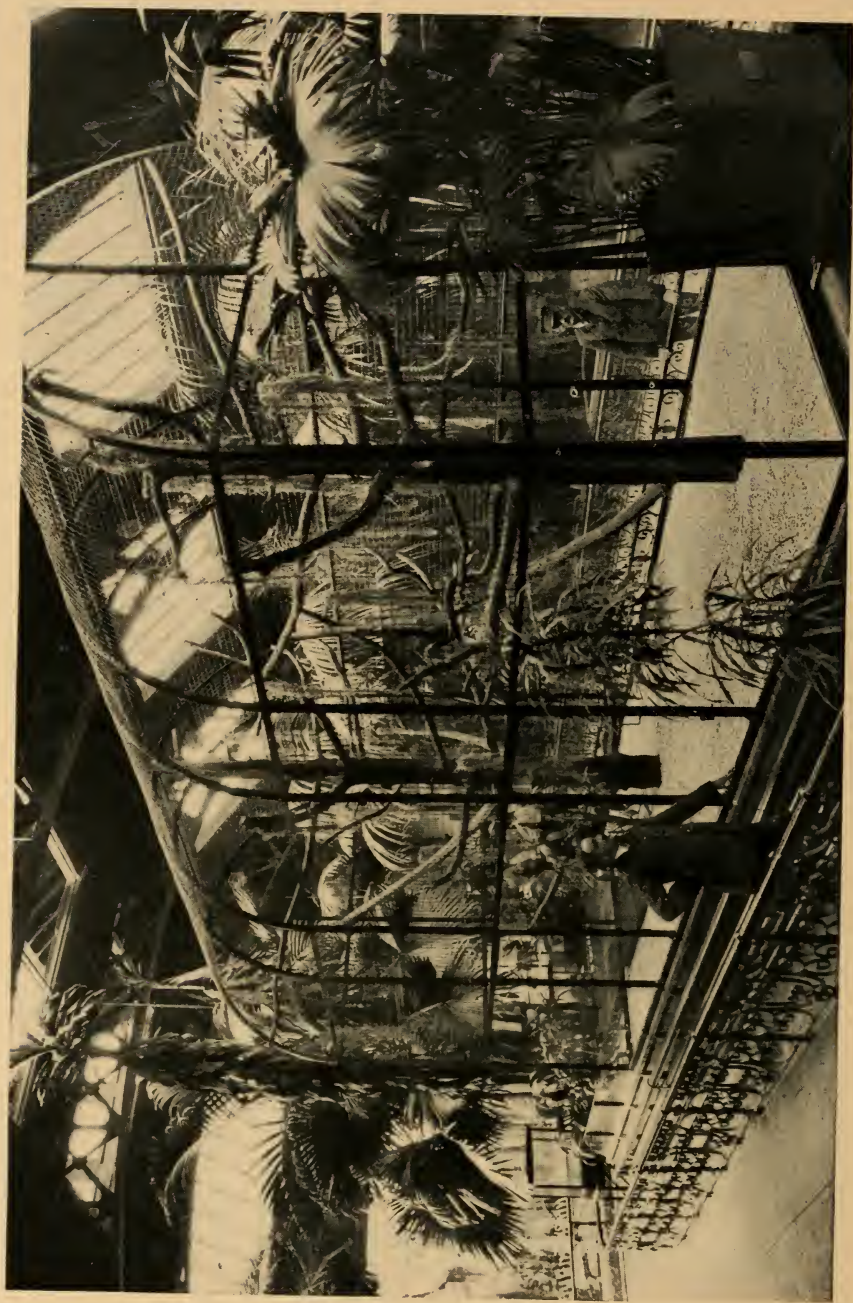
New Negatives, Park and Aquarium	154
Prints for Publication	1,184
Prints for Private Use	1,007
Prints for Index Album.....	132
Replacements	202
Miscellaneous	192
Lantern Slides	6
Positives	36
<hr/>	
Total	2,913

Mailing:

Bulletin	20,766	copies
Report	2,807	"
Zoologica	1,880	"
Zoopathologica	252	"
Garden Party	2,925	"
Annual Dues and Ticket Books.....	2,820	"
Preliminary Notices—Annual Meeting.....	2,836	"
Annual Meeting	2,954	"
Miscellaneous	2,767	"
<hr/>		
Total	40,007	"



AFRICAN ELEPHANT
Loxodonta oxyatis



New Cage for the Reticulated Pythons in center of Reptile House.



MALAYAN PYTHONS
Python reticulatus



Turtle Bank at west side of Repile House lobby, containing specimens of *Chrysomys* and *Pseudomys*.



East side of Tortoise enclosure in lobby of Reptile House, containing species of *Testudo*.



RUSSIAN BROWN BEAR
Ursus arctos.



GRAY'S WATER BUCK,
Cobus maria.



GREVY'S ZEBRA,
Equus grevyi.



INDIAN ELEPHANT
Elephas indicus.



EUROPEAN WHITE PELICAN,
Pelecanus onocrotalus (Gmelin).



BLUE-FOOTED BOOBY,
Sula nebouxi (Milne-Edwards).



HUMBOLDT PENGUINS,
Spheniscus humboldti (Meyen).

DISTRIBUTION OF SPECIMENS FROM THE ZOOLOGICAL PARK

REPORT OF

THE DEPARTMENT OF COMPARATIVE ANATOMY

AMERICAN MUSEUM OF NATURAL HISTORY

I BEG to submit my annual report on the specimens received from the New York Zoological Society during the year 1927. The number of specimens totalled 207, of which 206 came from the New York Zoological Park, and one, a gannet, from the New York Aquarium.

The monthly receipts of material were as follows:

NEW YORK ZOOLOGICAL SOCIETY

	<i>Specimens</i>		<i>Specimens</i>
January	12	July	28
February	13	August	19
March	14	September	13
April	17	October	19
May	22	November	24
June	11	December	15
Total			207

Study material was furnished by the Department of Comparative Anatomy, during the year, to many special investigators, including:

Professors Tilney and Riley, studying the comparative anatomy of the brain of man.

Professor Adolph H. Schultz, Johns Hopkins Medical School, studying the bodily measurements of young and adult primates.

Professor Dudley J. Morton, Yale University, studying the comparative anatomy of the human foot.

Dr. W. L. Straus, Jr., studying the comparative anatomy of the primates.

Miss Harriet C. Waterman, studying the comparative anatomy of the primate pelvis.

Mr. Herbert O. Elftman, studying the comparative anatomy of the pelvis of marsupials.

Mr. R. T. Hatt, New York University, studying the comparative anatomy of the lumbo-sacral region in reptiles and mammals.

Mr. Herbert C. Ruckes, College of the City of New York, studying the development and osteology of turtles (in conjunction with the Department of Herpetology).

The general distribution of the specimens received from the New York Zoological Society is shown in the following summary:

Department of Mammalogy	41
Department of Herpetology	40
Department of Ornithology	54
Department of Comparative Anatomy	47
College of Physicians and Surgeons.....	16
New York University	2
Not Utilized	7

207

WILLIAM K. GREGORY, *Curator*.

REPORT OF
THE PENSION BOARD
TO THE BOARD OF MANAGERS

THE Pension Board, under the Chairmanship of Dr. Lewis Rutherford Morris, held all its meetings during the year at the office of the Treasurer, Mr. Cornelius R. Agnew, 22 William Street.

The personnel of the Board for 1927 was as follows: Dr. Lewis Rutherford Morris, Chairman; Mr. Cornelius R. Agnew, Treasurer; Mr. H. R. Mitchell, Assistant Treasurer; Mr. Lee S. Crandall, Secretary; Dr. W. Reid Blair, Dr. George Bird Grinnell, Dr. Charles H. Townsend, Mr. W. Redmond Cross, Mr. William B. Osgood Field and Mr. George C. Clark, Jr.

On January 1, 1927, two amendments, passed during 1926, came into effect. The first, exempting from further payment of pension dues all employees who have reached the age of sixty-five years, resulted in the exemption of thirteen employees, who were at that time contributing a total of \$39.57 per month. During the year, two additional members of the fund reached exemption age.

The second amendment granted to the widows of pensioned employees the same pensions that their husbands were receiving at the time of death, instead of 50 per cent of same, as previously provided. This amendment had the effect of increasing the pensions of two widows on the pension list, from \$16.85 to \$33.70, and from \$16.78 to \$33.56 per month, respectively.

Widows' pensions were granted during the year to Mrs. Helena Fitzpatrick and Mrs. Minnie A. Allison. Retirement pensions were granted to William Grebe and Frank Dikeman, each having passed the retirement age by several years. This brought the total number of names on the pension roll, at the close of the year, to eighteen, representing a monthly payment of \$1,023.45.

There were but two resignations from the fund during the year, while eighteen new members were added, thus indicating a healthy growth.

While the gain in our resources was somewhat less than in previous years, we are pleased to report a net increase during the year of \$6,155.46. Our total accumulation since the founding of the Pension Fund on August 1, 1914, is \$138,813.38, of which \$7,486.63 is represented by cash in bank and the balance in high grade securities.

Respectfully submitted,

DR. LEWIS RUTHERFURD MORRIS,
Chairman.

LEE S. CRANDALL,
Secretary.

NEW YORK AQUARIUM

Pictorial Section



SOUTH AMERICAN LUNG FISH



LABORATORY—ADJACENT TO LIBRARY.



LABORATORY—NORTH TOWER.



BONY GARS AND BOWFINS

REPORT OF THE DIRECTOR OF THE AQUARIUM

By CHARLES M. BREDER, JR.

*Acting Director*¹

THE year 1927 marks the passage of a quarter of a century since the New York Zoological Society took over the administration of the Aquarium for New York City. The formal contract between New York City and the Society took effect on November 2, 1902. Simultaneously with this Dr. Charles H. Townsend became the director. With his incumbency and the influence of the Society the Aquarium entered a new era of achievement. Fortunately this same leadership still carries on.

Although it is not the purpose of this report to present an historical record of the progress of the Aquarium under Dr. Townsend's direction in the Society's regime² it may be mentioned that the vast changes and extensive improvements made in these twenty-five years have in all cases been effected only by extreme effort on the part of the Director. Such have been the difficulties that only by the greatest perseverance has he succeeded. In the face of the most discouraging obstacles, the Aquarium has been brought to its present high state of utility and value to both the general public and special groups. The latter include not only biological students, but artists, sculptors, designers, chemists, physicians, teachers, engineers, and others. One of the most pernicious difficulties encountered has been the necessity to work on extremely meager amounts of money, resulting in an unfortunate but necessary attitude toward disbursements. This has extended to economical practices unheard of in other institutions that have survived and raised themselves to similar positions of public importance. Viewing what has been accomplished under such conditions it would be interesting to speculate on what Dr. Townsend might have accomplished with adequate financial support.

¹ Prepared in the absence of the Director, Dr. C. H. Townsend, who at this writing is leading an expedition to the Galapagos Islands for the New York Zoological Society.

² Further details of an historical nature are to be found in the January-February Bulletin.

Among some of the more important improvements effected under Dr. Townsend's directorship may be listed the following:

- A reservoir for stored sea water.
 - Existing skylights enlarged and 56 new ones added.
 - Installation of a ventilating system.
 - Redecorating of the whole interior.
 - Enlargement of exhibition tanks.
 - An electric pumping plant in a new location.
 - A collecting boat.
 - Construction of pipe tunnels under main floor.
 - The introduction of lead-lined piping.
 - The installation of filters for stored sea water.
 - The installation of filters for harbor water.
 - The installation of a large feed-water heater for boilers.
 - The introduction of electric light.
 - The construction of improved shipping tanks.
 - The construction of ornamental rock-work in tanks.
 - The installation of a fish hatchery exhibit.
 - Balcony over old engine room cut back.
 - Installation of compressed air line to tanks.
 - Installation of thermostat heating system.
 - Construction of vestibule with storm doors.
 - Installation of seats for public.
 - Installation of automatic lantern slides projector.
 - An improved labeling of the collection.
 - The building up of a library on aquatic life.
 - The erection of a third story for offices, the library and laboratories.
 - The refinishing of the exterior of the Aquarium in gray.
 - The publishing of popular and scientific books and papers.
- Both New York City and the Society have supplied funds making these improvements possible.

Building Improvements: The contract calling for improvements embracing principally the rustication of the exterior of the building, the addition of a third story, the extension of the second to accommodate new distributing tanks, the enlargement of the entrance hall, et cetera, was finally concluded in the early part of 1927. No provision was made for the restoration of the gutter around the top of the outer wall which

has resulted in a considerable staining of the new walls. It was found, however, to be removable without undue difficulty. Consequently, when such a gutter is provided this may be rectified, if it is not allowed to rest too long.

The most evident and outstanding needs of the Aquarium at present are as follows:

A new gutter and parapet around the outer wall; equipment for the exhibition of small tropical fresh-water fishes; equipment for two large wall tanks; turnstiles at the entrance and an exit at the rear of the building. These much needed improvements and various others equally necessary, but less evident to the visitors, are now in the process of being arranged for with the City authorities. When these changes and additions are once an accomplished fact the institution will be in a position where it can devote a proportionally larger portion of its resources and attention to the collections proper, instead of necessarily being so much concerned with the limitations of working with inefficient equipment.

New Quarters: The new quarters provided by the recent improvement are now occupied as follows:

Third Floor

Director's office (south tower).
Secretarial and disbursing office.
Library.
Laboratory.
Laboratory and laboratory office (north tower).

Second Floor

Salt water distributing tanks (south tower).
Employees locker room and lavatory.
Office of the Aquarist.
Publication storage room.
Work shop.
Fresh water distributing tanks (north tower).

Attendance: There has been a gratifying increase in the number of visitors this year which we associate largely with the improved and more attractive appearance of the building. During the past few years, with the actual construction in progress, the Aquarium was unsightly

and doubtless this repellent appearance contributed chiefly to the fact that during these years (1923 to 1926 inclusive) the attendance fell below the two million mark. It is satisfying to find this immediate responsiveness on the part of the public. There were 406,525 more visitors this year than last, or an increase of over twenty-three per cent.

THE LIVING EXHIBITS

The collections of the Aquarium at present number as follows:

	<i>Species</i>	<i>Specimens</i>
Mammals	2	7
Birds	5	16
Reptiles	19	166
Amphibians	11	63
Fishes	145	3,191
Invertebrates	16	995
	<hr/>	<hr/>
	198	4,438

This list does not include various small fishes and invertebrates available as food for the larger forms and for other purposes. As with the attendance of visitors, we suffered a slight decrease in numbers during the construction work and are pleased to be able to report a rehabilitation of numbers of both species and individuals. Actually there has been on exhibit a greater variety of species this year than at any time since 1916. It is noteworthy that the census taken at the end of the year represents the collection when practically at its lowest ebb. By that date all the exceedingly delicate forms that do not survive well in captivity have usually died and those existing are generally well acclimated. In other words the mortality rate is always lowest from about December to April. After that month we are apt to have difficulty with various parasites and infections in the fresh-water collections which become active with the warming spring waters. The resumption of collecting operations at about this time, usually suspended in October, brings in fishes of which there are always certain percentages that are quickly added to the death list, either through injury, disease or for various other reasons.

Specimens of note: A fine specimen of the South American lung fish (*Lepidosiren paradoxa*), received from the London Aquarium has

been with us since May 31. It has had two attacks of some fungus growth which it finally survived after a period of rest in a tank of mud which simulated aestivating conditions. As this fish habitually rises to the surface for breathing purposes it was found desirable to cover over the top of its tank to insure warm moist air for its respiratory chamber.

A number of aquatic birds have been added to two of the floor pools with an enlivening effect on the building. They include two species of gulls and a Canada goose which fell wounded in Battery Park but which has completely recovered.

A matamora turtle of South America and several African side-necked turtles were added to the general collection of fresh-water turtles.

A tank full of grayling, presented by the South Side Sportsmen's Club, which were reared on the Club grounds now disport in the fresh-water group of tanks. They maintain a splendid health which is remarkable as they are naturally rather delicate.

Mr. L. L. Mowbray, formerly of the Aquarium staff presented a collection of Bermuda toads which is doing well under the conditions we are able to provide for such creatures at present. Their appetites are tremendous, considerably exceeding those of our native toads.

For the first time in their history our gar fish (*Lepisosteus*) spawned this spring. It was a niggardly amount but the eggs were sound and hatched into active larvae. We were unable to rear them, however, but being forewarned now, we are looking forward to next spring with expectations of better success.

The rock bass (*Ambloplites*) built nests and spawned also but due to the hostility of the non-spawners they were unable to properly care for their eggs and we hesitated to remove them on account of their exhibition value.

Fish Hatchery: The fish-cultural exhibit was maintained as heretofore and drew its usual number of interested spectators. Steelhead trout eggs from the United States Bureau of Fisheries and brook trout eggs from the South Side Sportsmen's Club of Long Island were incubated with marked success. As has been the practice for some years, the fry were turned over to the Palisades Interstate Park Commission for the

stocking of their waters. There were 7,000 steelhead trout and 18,500 lake trout (carried over from last year) so disposed of.

As a further fish cultural demonstration a model "fish-way" or "fish-ladder" is in the course of construction. It is to be placed near the hatchery to illustrate another bit of technique in the husbandry of fresh-water fishes.

Work of the Collecting Boat: The Society's boat *Seahorse* served another season of useful activity (her eighth) in the collecting of local marine specimens for both exhibition and feeding purposes. The engine that had been in use from the start gave considerable trouble and finally failed altogether. It became immediately necessary to replace it in order to continue the season's work.

The new engine, model B 32-40 H.P. Red Wing motor, was purchased at a cost of \$688, and has given satisfaction for the short time it has been in use.

It so happens that in Sandy Hook Bay, where the *Seahorse* operates for the most part, fishing from the Aquarium's standpoint is most satisfactory in late summer and early fall. Fishes typical of more southern latitudes urged northward by the Gulf Stream then begin reaching our shores in quantities. These are usually young fishes swept along before they are able to stem a flow of any force. It is thus apparent that it was vitally necessary for us to maintain the vessel in working order toward the end, and most important part of the season.

Most of the trips were undertaken by the Collector, Mr. M. King, as both Dr. Townsend and Mr. Breder were otherwise occupied throughout the summer. Thirteen trips were made, none of which exceeded two days in duration. These yielded 2,049 specimens of 47 species of fishes and 1,630 specimens of 11 species of invertebrates in addition to quantities of animal and vegetable food used for the maintenance of the exhibits.

Collections by the Staff: A single shipment was made from Key West, Florida, to replenish the tropical marine fishes. The usual collections in local fresh-water lakes were made both for feeding and exhibition purposes.

Budget: The City of New York provided a maintenance fund of \$65,228, for the year 1927. The New York Zoological Society pro-

vided from its own funds \$10,085.83 as additional compensation to employees of the Aquarium and \$2,861.55 for providing additional exhibits.

Application has been made for a "lump sum budget" in order to allow more flexibility in the disbursal of funds, as, in the past, difficulty frequently has been encountered with an itemized budget. It has been intimated that this will be granted for the 1928 budget.

New Grates: Mr. Fenstemaker negotiated with the Pyramid Iron Products Corporation for the installation of a new type of grate using a forced draft and involving a reduction in cost of approximately 50 per cent for which the company gave a completely protecting guaranty. These were installed near the end of the year and thus far have completely fulfilled the promises made for them.

Reservoir Repairs: The reservoir for stored sea water installed in 1907 has been leaking badly for some time. This seems to be due largely to age and now aggravated to a considerable extent by the extensive blasting in the nearby harbor. An attempt at relief consisting in "pointing up" the cracks was not completely satisfactory and eventually the reservoir will have to be entirely relined.

Gifts: Among the more noteworthy gifts to the Aquarium during the year may be mentioned the following:

Mr. E. K. Bruce of Thornburg, Iowa, presented the Aquarium with a collection of eighty fancy gold fish.

Mrs. J. H. Cummings of Wilmington, N. C., presented nine fresh-water turtles and a fine collection of aquatic plants.

The Kansas Fish and Game Commission presented forty-six fresh-water turtles from that state.

The South Side Sportsmen's Club of Oakdale, Long Island, presented a splendid collection of one hundred grayling and seventy-five brook trout.

Young's Pier Corporation of Atlantic City, N. J., presented a collection of miscellaneous marine fishes taken at that place.

The London Aquarium successfully transported to us a South American lung fish (*Lepidosiren*).

Veterans: It is interesting to note the veterans in both the personnel and exhibits. Two employees that were in the service of the Aquarium when the Society assumed its management have survived to be on the active payroll today. They are John Keleher and David Daley, both doing service as guards.

Among the fishes, there are specimens of the bowfin (*Amiatus calva*) and the long-nosed gar (*Lepisosteus osseus*) that were brought to the Aquarium on the first shipment made under Dr. Townsend's direction, a little less than a year after his election to office. Others have been added from time to time and it is now difficult, if not impossible, to be sure which is which, but the deaths have been so few that we are certain that some of the largest date from that earliest shipment.

Boarded Animals: Two sea lions were boarded with the Aquarium for the cold months by the Central Park Zoo, and two harbor seals by Young's Million-Dollar Pier of Atlantic City. The two seals were also boarded during the winter of 1926-27.

New Sea Water: Mr. Henry D. Whiton presented the Aquarium with 86,000 gallons of sea water, which was brought in on one of the Union Sulphur Co.'s boats. This was badly needed and the marine fishes have showed a most gratifying improvement in health and lowered mortality rate as a result thereof. A detailed analysis of the sea water in December showed it to be quite normal chemically. As far as possible, the old water was discarded as a previous examination showed it to be abnormally high in magnesium and calcium. This water, with additions from time to time, had been in use since the construction of the reservoir. Such a period is doubtless too long for water in a system of this sort, but is rather surprising that its condition was not worse.

Aid to Schools: Aid of various kinds was given to schools including both information and certain living marine specimens for classroom aquaria. Large numbers of pupils in class groups were brought to the Aquarium for study purposes. Miss Mellen rendered docent services to some of the more advanced groups. On her own initiative she also prepared and distributed to schools a considerable quantity of museum material relative to aquatic biology.

Material for Dissection: Specimens that have died in the Aquarium and which were of no immediate value for the needs of the in-

stitution have been turned over to various organizations and individuals for autopsy, research and similar purposes. The bulk of these went to the Department of Comparative Anatomy of the American Museum of Natural History. There is thus very little waste to specimens at the Aquarium for after they eventually die they become of value for purposes of dissection and study. The Museums and Universities in and about New York City are availing themselves of this service practically to its limit now.

Library: Miss Mellen, assisted by Mr. Howley, finished listing the titles in the library. The library at present consists of about 1,700 bound books and 1,500 pamphlets and is continually growing. A conventional card catalogue both by subject and author is greatly needed for reference.

Water Conditions: A method has been inaugurated for keeping a continuous check of the fluctuations in the pH values (acidity and alkalinity) of the various systems of water used in the Aquarium. This with the temperature and specific gravity readings, and an occasional analysis of the sodium, magnesium and phosphate contents, will give us practically complete knowledge of the water conditions. A few years' records of these will doubtless prove invaluable. There is the intention to eventually devise a suitable method for the control of these factors.

Disease: The continued attention of Miss Mellen has been given to the ailments sometimes afflicting our various specimens. Most of her studies have been on fishes and she has lately completed a paper for *Zoopathologica* which embodies her results. This should appear some time during the coming year and with the scant "clinical" data available on the subject will doubtless form a basis for future work.

An Aquarium Book: The Director has completed his work on the operation of public aquariums based on his twenty-five years of experience at the New York Aquarium as well as his previous connection with exposition aquariums. This treatise is now in the process of being published by the United States Bureau of Fisheries and will appear as a public document. It is to be entitled *The Public Aquarium, Its Construction, Equipment and Management*. It fills a long felt want and will doubtless be the hand-book of many future aquariums. Incident-

ally it is expected that it will relieve the Aquarium Staff of the time consuming task of answering many oft-repeated inquiries concerning such matters. It is, indeed, appropriate that this should appear just at the passage of a quarter-century of activity by Dr. Townsend as Director.

Ultra Violet Light: The Acting Director for some time, has been considering the possible effect of the complete lack of ultra-violet rays in aquaria. These, the "chemical" rays which greatly influence the metabolic activity of both animals and plants, are completely strained off by ordinary glass, which is entirely opaque to them. There are two methods by which such rays may be brought to the captive animals in an aquarium. One is the use of a recently devised glass of different chemical composition which allows the passage of certain of these rays. The other is the use of a specially constructed arc lamp which produces a considerable portion of the ultra-violet band in great intensity. Their relative advantages may be compared as follows:

Glass: After the first cost there is no upkeep. The band transmitted is not as wide as that of the arc type. The quantity is not under immediate control, the season and weather conditions acting as an upper limit.

Arc Lamp: There is a small upkeep cost and the burner eventually wears out. The band transmitted includes nearly the entire ultra-violet range. The quantity is under immediate and accurate control irrespective of seasonal and weather changes.

Although there is no doubt that some form of glass transparent to ultra-violet rays would be generally tonic and beneficial to many of the inmates, for the purpose of the contemplated experiments it is evident that the carefully measured doses that a lamp makes possible are greatly preferable. Consequently arrangements have been made with the Hanovia Company of Newark, New Jersey, through Dr. Alfred Hess of the College of Physicians and Surgeons for the loan of one of their lamps for these experiments. Dr. Hess who has been working on Aquarium material with reference to colestrol is carrying on further work employing this lamp from a different point of view but one that interlocks with these very practical aquarium interests.

Warming of Fresh Water: While awaiting developments making possible the establishment of proper equipment for the maintenance of

fresh water tropical fishes three gallery tanks have been piped for a supply of warm fresh water. One contains a South American lung fish, another a general assortment of small tropical "aquarium" species and the third thirteen young half-moons (*Pterophyllum scalare*). This latter has been in the nature of an experiment, the Acting Director having reason to believe that the half-moon, delicate in a standing-water aquarium is not especially suited to such conditions. As far as he is able to learn no one has attempted to keep this species in running water and to date, at least, his suppositions appear to have been completely borne out. Although these fish were shipped from Germany none died and their growth has been more rapid than is ordinarily to be found in this species in a balanced aquarium.

Cooling of Fresh Water: For the third summer all the Salmonidae were carried without refrigeration and with equal success. A special cooling device in which water falls from a height over baffles was tried out. Although it operated satisfactorily it was in no way superior to the perforated pipes of our own design. This system, no longer an experiment, was extended and given increased capacity to carry a larger number of fishes.

Some extracts from a recent short paper entitled *On the Temperature-oxygen Toleraton of Brook Trout* (Breder) are given below by way of further explanation:

"The presence of a sufficient quantity of oxygen to satisfy the needs of a given number of trout is controlled jointly by the temperature and the local conditions effecting the opportunity for exchange of gases, such as riffles, water-falls, shallows, etc. For example *Salvelinus fontinalis* Mitchill and *Salmo irideus* Gibbons (introduced) are common in some of the mountain streams of Ashe County, North Carolina. Here in places the summer temperature reaches at least as high as 80° Fahr., where the streams meander shallowly but fairly swiftly through cultivated valley bottom fields. The trout are thus subjected to high temperatures in July and August but are well supplied with oxygen and show no distress. The fact that they seek the shade of stream side bushes is referred to other factors, for the temperature and oxygen is imperceptibly if at all different in the various closely adjacent spots in these rapidly moving waters. The reasons for the fishes seeking such shelter is referred to causes such as a negative heliotaxis, the seeking of quieter water generally to be found in such places, a hiding from enemies and the finding of a lurking place from which to prey on smaller fishes. Furthermore, it is not uncommon, under special conditions to find them disporting in the sunlight.

"Considerable experience at the New York Aquarium with these species as well as other Salmonidae; *S. fario* Linnaeus, *S. mykiss* Walbaum, *Cristivomer namaycush* (Walbaum), *Oncorhynchus tshawytscha* (Walbaum) and *Coregonus clupeiformis* (Mitchell) has strengthened this view. Formerly these

fishes were kept in a closed circulating system which was refrigerated. After a time they began to show bad effects from it, which the admission of small quantities of new water checked to a limited extent. It is believed that the trouble lay in the accumulation of the dissolved and liquid wastes of the fishes themselves eventually reaching their upper limit in the toleration of acidity. Fishes which will not tolerate waters as cold as those inhabited by trout have not such high oxygen requirements and it is thought that under such low temperatures their metabolic rate would be slowed down to an extent sufficient to prevent them from normally completing their life cycle. That all our northern fishes will stand the rigors of our winters is evidence that it is not inimical to their health but merely checks activity, frequently to the point of complete or semi-hibernation. Trout on the other hand are of course not affected this way. A study of the accompanying physiological differences would be interesting. In 1925 a new system was installed in the New York Aquarium in which the water was used at its normal summer temperatures, but was sprayed into the tanks in many small jets so that a thorough aeration was insured¹ as well as a complete circulation within the tank permitting of no "dead pockets." Since then this method has been used with marked success, losses of specimens during the warm period being reduced by more than half, although the water has reached as high as 71° (in the tanks). This is naturally interpreted to mean that despite the temperature, we have been able to dissolve enough oxygen for their needs even at the increased metabolic rate induced by the warmer water. The present views may be expressed by the following tabulation.

"1. *Salvelinus* (at least) has a rather wide H-ion tolerance, but is probably more tolerant of high acidity than of high alkalinity.

"2. It has a wide temperature tolerance, from freezing to at least 80° Fahr. High temperature becomes a limiting factor only when other conditions allow it to restrict the solution of oxygen below the minimum required by the fish, irrespective of the temperature's absolute value.

"3. *Salvelinus* has a high oxygen requirement and as a consequence, it can only survive in well aerated water.

"4. Local conditions greatly affect the amount of dissolved oxygen in water of a given temperature and consequently, with temperature, control the limiting factor, oxygen."

Discolored Fresh Water: Once again discolored fresh water in the late winter and spring months has interfered with the fresh-water collections. Not only did it almost completely negative the entire fresh-water exhibit but it also greatly interfered with the care of the fishes. Those charged with the care of these fishes, themselves, could not see what was going on in the tanks. A new and additional filter was installed which could effect no material improvement. Dr. Frank E. Hale, Director of Laboratories of the City Water Department was called in and after an intensive study of conditions reported that as the matter in suspension was practically in a colloidal state little could be hoped for from any practical mechanical filter. He recommended a

¹This spraying lowered the temperature not more than 1 or 2 degrees, an amount entirely insignificant here."

chemical precipitating device involving the use of alum. This has not been installed as yet for although recognizing it as a practical device, we have feared under the Aquarium working conditions that we might have serious trouble in the event of even a minor derangement with possible great losses.

Building and Equipment: A considerable number of both large and small repairs, replacements and improvements were made by the staff. Chief among them may be summarized the following.

The floor office was rehabilitated, including the placement of counters, rails and added desk space.

Label-frames for descriptive labels were made in an improved style to fit the angle-iron holders.

The gallery floor was braced where worn and a new iron gutter placed under it.

The mounted fish were rearranged and re-hung by improved methods on walls and in arches.

Iron grill work was placed in gun embrasures.

Fourteen tanks were reconditioned and re-cemented.

Several of the "reef" tanks have been re-rocked with an improved and more massive effect.

The automatic projector has been placed in working order and has had new slides prepared for it.

Many labels have been rewritten bringing data down to date.

Laboratory: The space provided in the new quarters for the laboratory is adequate, well lighted and entirely satisfactory. There is, however, a distressing lack of a comparatively few simple requirements including proper apparatus and laboratory furniture. The Acting Director who has given this matter his special attention has arranged the available equipment so as to obtain a maximum utility and has conferred with representatives of biological supply houses for figures on a "skeleton" equipment.

Although barely housed in the new quarters, applications and requests have been received for permission to use the new quarters for certain types of research that might be best done here. Even with our inadequate facilities the following workers have been accommodated.

Dr. F. D. Wood.....Autotomy in Crustacea

Dr. H. E. Smith.....Physiological determinations

Mr. S. J. Gancher...Development of *Craspedacusta sowerbrii*
Mrs. R. B. Breder.....Amphibian and Reptilian habits
Mr. R. A. Nesbitt.....Experiments in fish tagging

In addition, Gertrude Boyle (Mrs. Kanno) used the outer laboratory as a studio for the purpose of modeling a seahorse bas-relief under Dr. Townsend's direction to be placed over the main entrance. This very pleasing model has been figured in the January-February *Bulletin*.

Dr. Smith found it satisfactory to travel back and forth periodically from the University of Virginia, leaving his delicate and valuable apparatus set up in the laboratory.

The appearance of *Craspedacusta*, the rare fresh-water jellyfish, in one of the balanced tanks induced Dr. Ruth Howland of Washington Square College to have one of her students spend considerable time on their development.

This, of course, has been in addition to work Mr. Breder has been carrying on in the laboratory as time would allow. Some of the studies are as follows:

Continued studies on the locomotion of fishes.

Study of the development of color in goldfish.

Study of the breeding habits of certain tropical fishes.

Examination of some of Mr. H. P. Bingham's oceanographic collection.

Other items of a laboratory nature but of more immediately practical significance to the Aquarium proper are mentioned under other headings. It may not be evident at first glance, but is nevertheless true, that many problems of an apparently purely academic nature, if not all, have a distinct bearing on these more immediate Aquarium activities. The influence of such studies may take a somewhat longer time to be felt but are also usually of a more fundamental significance.

Field Studies: Just at the close of the year arrangements were made with the Wyanokie Zoological Station² to bring it within the jurisdiction of the New York Zoological Society. This organization operated privately, for the benefit of field zoologists, providing an unpretentious

² See C. H. Townsend "A Local Zoological Station." Bull. N. Y. Z. S. Vol. XXX No. 3. p. 78.

site where such students may work undisturbed on the local fauna, has concluded its first year very successfully.

Although much of its work was necessarily in the nature of organization and establishment, research was pursued in ornithology, herpetology, ichthyology and botany.

Various active local naturalists and some visitors from distant points took part in these studies on the grounds. The Green Mountain Club and guests were entertained with an illustrated lecture. The Founder, Mr. James E. Brooks and Ruth B. Breder, who directed activities are both well pleased with the year's results.

It is intended to extend such activities under the auspices of the Society.

Publications by the Staff: The following publications, exclusive of those in the Zoological Society Bulletin, prepared by members of the staff appeared in 1927:

C. H. TOWNSEND

Old Times with the Birds: Autobiographical. The Condor. Vol. XXIX, pp. 224-232. Sept., 1927. This is reprinted in the Jan.-Feb. Bulletin.

C. M. BREDER, JR.

The Marine Fishes of New York and Southern New England. J. T. Nichols and C. B. Zoologica. Vol. IX, No. 1. March 3.

On the temperature-oxygen toleration of Brook Trout. Copeia No. 163. April-June. pp. 36-39.

Frog Tagging: A method of studying Anuran Life Habits. With the collaboration of Ruth B. Breder and Albert Redmond. Zoologica. Vol. IX, No. 3, Sept. 29. pp 201-229, figs. 11.

Scientific results of the first oceanographic expedition of the Pawnee—Fishes "1925" Bull. Bingham Oceanographic Collection. Vol. 1. Art. 1. Oct. 19. pp. 1-90, figs. 36.

The Fishes of the Rio Chucunaque Drainage, Eastern Panama. Bull. Amer. Museum Nat. History, Vol. LVII, Dec. 8, Art. 3. pp. 91-176, figs. 15.

I. M. MELLEN

A Plea for the Turtle. Nature Magazine. Feb.

A Remarkable Goldfish. Aquatic Life. Oct.

Fish or Fishes? American Speech. Feb.

Words from Sea Animals. American Speech. Apr.

The Whale Is Not a Fish. Guide to Nature. May.

Fishes in the Home.

The Young Folks' Book of Fishes. Dodd, Mead & Company.

Fishes in the Home is an enlarged and cloth bound edition of an earlier treatment of the same subject which originally appeared in two parts in the New York Zoological Society Bulletin.

Lectures by the Staff:

C. M. BREDER, JR.

"The Arcturus Flying Fishes with Special Reference to Their Phylogeny." J. T. Nichols and C. B.

"New Techniques for the Field Study of Frogs and Turtles." C. B. and R. B. Breder.

Both at the annual meeting of the American Association of Ichthyologists and Herpetologists in Philadelphia.

I. M. MELLEN

"Limulus." New York Academy of Medicine, Section of Neurology and Psychiatry.

"How to Build and Maintain a Home Aquarium." The 22nd Assembly District Republican Club of Brooklyn.

"The Natural and Artificial Foods of Fishes." American Fisheries Society.

Radio: The following radio addresses were given during the year:

I. M. MELLEN

Station WNYCEleven

Station WGLOne

T. H. HOWLEY

Station WNYCOne

Station WGLTwo

Employees: An improvement in the morale of the force has been noticeable this past year. It culminated in a desire expressed to decorate the Aquarium for the Christmas holidays. Permission was granted and some not unattractive decorations were placed around the center pool.

ATTENDANCE AT THE NEW YORK AQUARIUM BY MONTHS, 1927

January	Visitors.....	83,636	Daily average.....	2,698
February	"	104,102	" "	3,718
March	"	141,976	" "	4,580
April	"	201,045	" "	6,702
May	"	243,424	" "	7,853
June	"	243,613	" "	8,121
July	"	291,647	" "	9,408
August	"	252,901	" "	8,158
September	"	209,321	" "	6,977
October	"	147,307	" "	4,752
November	"	122,244	" "	4,075
December	"	88,089	" "	2,842
<hr/>			<hr/>	
Total	"	2,129,305	" "	5,834

Record of monthly mean temperatures and specific gravities of the water of New York Harbor at the Battery in 1927.³

<i>Month</i>	<i>Temperature</i>	<i>Specific Gravity</i>
January	43	1.012
February	42	1.012
March	43	1.011
April	46	1.011
May	54	1.011
June	58	1.010
July	65	1.012
August	68	1.013
September	63	1.014
October	63	1.014
November	56	1.012
December	50	1.010

³ From daily observations made at the New York Aquarium by Mr. H. E. Dixon. Specific gravity observations made with samples of water brought to 60° Fahr.





The *Lieutenant* at anchor near the coral reefs of Haiti.

REPORT OF THE DIRECTOR DEPARTMENT OF TROPICAL RESEARCH

By WILLIAM BEEBE, Director

Regular Staff: WILLIAM BEEBE, Director; JOHN TEE-VAN, General Assistant;
WILLIAM MERRIAM, Field Technician; HELEN TEE-VAN, Artist; MARK
BARR, Physicist; JAMES JAMIESON, Physician; FLOYD CROSBY,
Photographer; BENJAMIN WARING, Assistant;
SERGE CHETYRKIN, Preparateur

Research Staff for Arcturus Material: WILLIAM K. GREGORY, C. J. FISH, M. P.
FISH, JAY PEARSON, LEE BOONE, DWIGHT FRANKLIN, W. K. FISHER, H. P.
BIGELOW, J. T. NICHOLS, C. M. BREDER, A. L. TREADWELL

THE eleventh year of the Department of Tropical Research had as its dominant activity the Haitian Expedition.

This left New York on December 30 in the four-masted Schooner, *Lieutenant*, which anchored in Port-au-Prince Bay, Haiti, on January 20.

A complete résumé of this Expedition is to be found in the Zoological Society Bulletin for September-October, 1927.

I will here recapitulate only the five chief objects of the Expedition:

- (1) To prepare a list of Haitian fish, there being none in existence.
- (2) To study at close range and at first hand by means of a diving helmet the life of a coral reef.
- (3) To obtain motion pictures of the life of a coral reef.
- (4) To test a wholly new idea of a floating laboratory.
- (5) To see how inexpensive an expedition of this kind can be made.

(1) In the space of one hundred days, we secured between 280 and 300 species of fish in one small area of the Gulf of Gonave, near Port-au-Prince. It is interesting to note that in 400 years there have been recorded from Porto Rico only 300 species.

Our Haitian fish are being studied by Mr. Tee-Van and myself and the list, together with considerable contributions to their life histories, will soon be ready for publication.

A fisheries department is wholly lacking in the present occupational scheme of America in Haiti, so duplicate collections are being made for the Haitian Government, and a large amount of economic information was accumulated and left at its disposal.

(2) The Director spent several hours every possible day, diving at one or the other of two reefs. These were located and photographed from airplanes and glass-bottomed boats, and the inhabitants were collected by means of hook-and-line, nets, seines, set traps, air rifles, poison and dynamite. The data thus gathered is already correlated and will soon be published.

(3) A brass box was made in New York City, fitted to hold a small hand motion picture camera, and with this on a weighted tripod, 1,000 feet of splendid motion picture film was obtained by Mr. Floyd Crosby. This was taken fifteen to thirty feet under water, and even at the greater depth showed full time exposure. Living coral of many species, sea-fans, sponges, and fish are shown, and the director in a helmet can be seen in various activities demonstrating methods of study on the sea bottom. Once a barracuda swims so near the camera that it more than fills the entire screen.

(4) The idea of a floating laboratory proved perfectly practical. A four-masted Schooner, the *Lieutenant*, was chartered in New York, loaded with the entire outfit and headed for Haiti, where she arrived twenty-one days later. Her crew, except the captain, was shipped back to New York at once. She anchored one hundred yards from the naval wharf at Bizoton, and within a few feet of a coral reef. Here she remained for four months, with the exception of two short tows to the Panama steamer across the gulf, for two thousand gallons of New York Croton water. An automobile on the shore kept us in contact with Port-au-Prince, three miles away.

We lived in nine tents on deck, where a small gasoline engine provided us with ice and electric light.

In glass-bottomed and other boats and in the schooner's big motor launch, we made constant trips to the two coral reefs off shore. On the schooner we were able to avoid dangers and annoyances such as malarial mosquitoes and inquisitive natives, and both days and nights were cool.

(5) Total expenses of expedition, for schooner, outfit, staff of nine, five months in Haiti, is as follows:

Outfit	\$3,209.00
Engine, ice and lights	1,193.00
Photographic supplies	1,489.00
Food and coal	1,196.00
Motor car	1,184.00
Fares	943.00
Schooner	5,936.00
	<hr/>
	\$15,150.00

Exclusive of salaries, the sum arranged for and provided by the generosity of members of the Zoological Society was ten thousand dollars. The additional amount was contributed by the Director. The total cost, considering the number of the staff and the facilities afforded by the schooner and outfit, is probably the lowest with which any similar expedition was ever undertaken and achieved.

The remainder of the year was devoted to the arranging and the preliminary study of the collections.

It is a pleasure to acknowledge the following gifts made directly to the Haitian Expedition:

George Eastman, \$100 toward films; William K. Vanderbilt, 6 one-metre silk nets, 1 old-fashioned diving helmet; W. F. Miller, 1 dininhood outfit complete, \$250; Goodrich Rubber Company, 1 rubber suit; Panama Railroad Steamship Co., 20 per cent discount on fares, luggage increase from 200 to 600 pounds; Samuel G. Hibben, Mgr. Westinghouse Lamp Co., electrical supplies; E. C. Vick, Director, Horticultural Adv. Agency, 1 auto-spray; H. E. Talbot, Jr., 1 sailing canoe, 1 English folding boat; E. C. Houch, Vice-Pres. Daisy Mfg. Co., 1 brass daisy air rifle; Bell Telephone Laboratories, telephone and outfit fitted to helmet.

An exhibition of Haitian paintings and specimens, the results of the expedition, was held at the American Museum of Natural History from January 1 to the 15, 1928. The paintings were by three artists who went to Haiti in connection with the expedition; Mrs. Helen Tee-Van, Capt. Vladimir Perflieff and Mr. Frederick Church.

William Beebe gave a lecture on the Haitian trip with colored slides and motion pictures at the Annual Meeting of the Zoological Society, besides delivering somewhat similar lectures over fifty times in other cities.

The interest taken in the expeditions of the Zoological Society is reflected in the translations into foreign languages of several of the books published under the auspices of the Society. *Galapagos: World's End* has been published in German and Swedish, *The Arcturus Adventure* in Norwegian, and *Jungle Days*, in German, under the following titles:

Galápagos, das Ende der Welt (Leipzig).

Galapagos, Verdens Ende (Oslo)

Med Djuphå och Dykarlijälm I Tropiska Hav (Helsingfors)

Oschungelleben, Forscherfreuden in Guyanas Urwäldern
(Leipzig).

During the year 1927 the lists of the publications of the Department of Tropical Research was brought up to a total of 281.

PUBLISHED CONTRIBUTIONS OF THE DEPARTMENT OF
TROPICAL RESEARCH IN 1927

249—Galapagos Brachyura

Lee Boone

Zoologica, VIII. No. 4

250—Contribution to The Embryology of The American Eel (*Anguilla rostrata* LeSueur)

Marie Poland Fish

Zoologica, VIII. No. 5

251—Malay Days

William Beebe

Zoological Society Bulletin, January-February

252—The Haitian Expedition

William Beebe

Zoological Society Bulletin, January-February

253—The Bite of the Vampire

C. H. Townsend

Zoological Society Bulletin, May-June

- 254—The Vampire's Bite
William Beebe
Zoological Society Bulletin, July-August
- 255—The Secret of the Swallow-winged Puffbird
Gloria Hollister and William Beebe
Zoological Society Bulletin, July-August
- 256—News from the Bottom of the Sea
Photographs by Floyd Crosby
New York Times, July 24th
- 257—In the Wonderland Below Tropic Seas
William Beebe
New York Times, July 24th
- 258—The Haitian Expedition
William Beebe
Zoological Society Bulletin, September-October
- 259—Records of Arcturus Drift Bottles
William Beebe
Zoological Society Bulletin, September-October
- 260—Strange Sea Forms
Photographs by Floyd Crosby
Zoological Society Bulletin, September-October
- 261—Notes on the Birds of Haiti
William Beebe
Zoological Society Bulletin, September-October
- 262—A Tarpon Nursery
William Beebe
Zoological Society Bulletin, September-October
- 263—The New Study of Birds
William Beebe
Zoological Society Bulletin, September-October
- 264—Roughing It in the Tropics
Mark Barr
Atlantic Monthly, November
- 265—Color Under the Sea
William Beebe
House and Garden, December

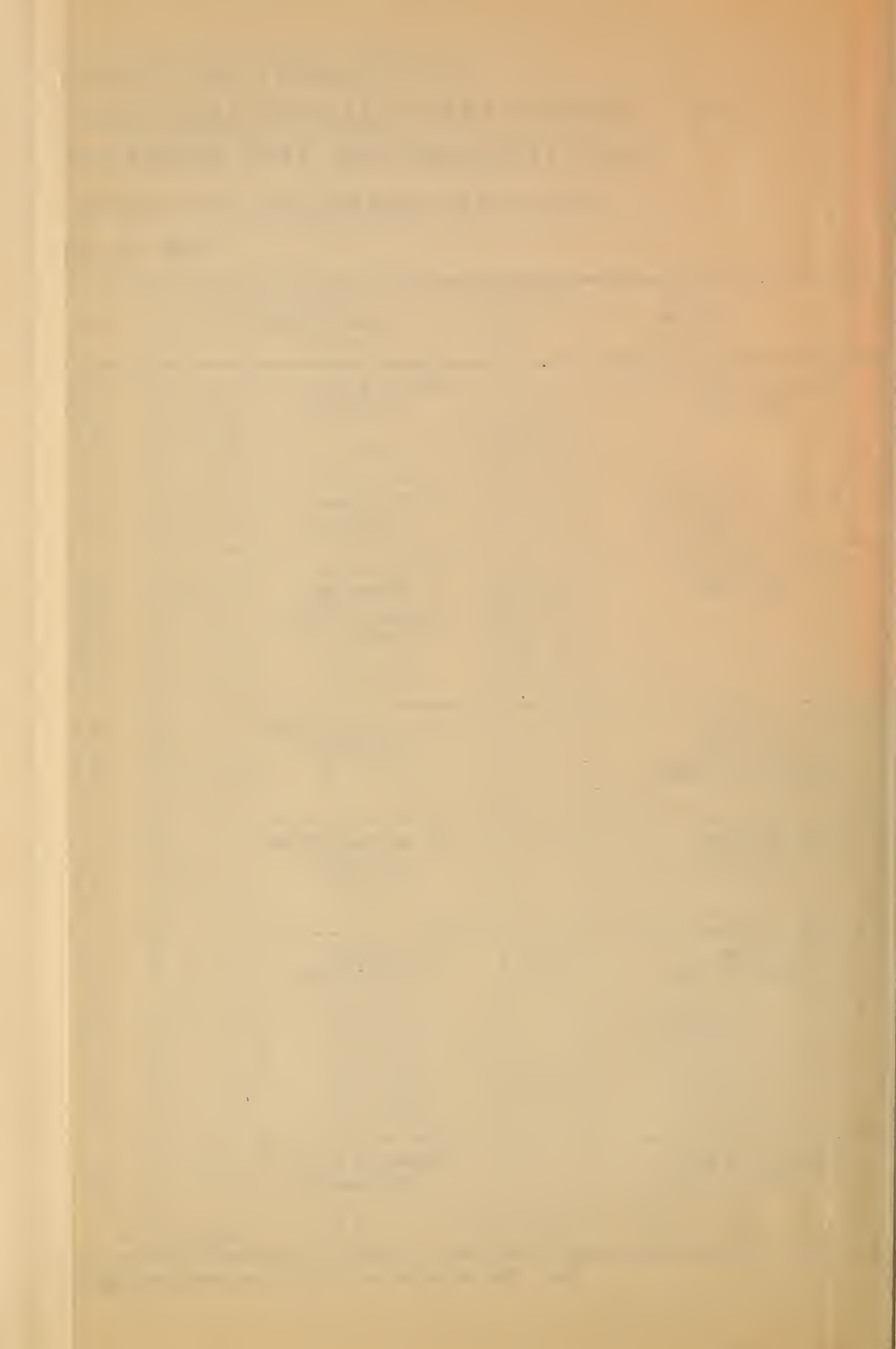
- 266—Red Howling Monkey
Helen Tee-Van
Macmillan Co.
- 267—Pheasants, Their Lives and Homes
William Beebe
Doubleday, Page and Company
- 268—Pheasant Jungles
William Beebe
G. P. Putnam's Sons, 1927
- 269—A New Genus of Chilopoda From British Guiana (*Kartops guianae*)
Gilbert Archey
Rec. Cant. Museum, II, Part 3 (New Zealand) 1923
- 270—Adaptation to Nocturnal Life in Various Animals of British Guiana
S. C. Crawford
University of Pittsburg Bulletin XXII, No. 31. 1926
- 271—A New Genus of Suriaan Toads (*Pipidae*)
G. K. Noble
American Museum Novitates, No. 164. 1925
- 272—The Whale Shark, *Rhineodon typus*, at the Galapagos Islands
E. W. Gudger
Science, LXV. No. 1692. June 3, 1927
- 273—Beebe's Brass Box
Marguerite Tazelaar
Amateur Movie Makers Magazine, II. No. 8. August
- 274—The Galapagos Penguins in Captivity
C. H. Townsend
The Auk, XLIV. No. 4. October
- 275—How Nature Lights the Sea
William Beebe
Trans. of the Illuminating Engineering Society, XXI. No. 6. 1926
- 276—Report of the Department of Tropical Research
William Beebe
Annual Report of The Zoological Society, 1926

- 277—Breeding Habits of the Tegu
A. M. Reese
Copeia, No. 110. p. 69
- 278—Body Forms of Fishes
Wm. K. Gregory
Zoologica, Vol. VIII. No. 6
- 279—Forest, Steppe and Tundra
M. D. Haviland
Cambridge University Press
- 280—Rocks of the Galapagos Islands
H. S. Washington and Mary G. Keyes
Jour. Wash. Acad. Sci. XVII. No. 21. Dec. 19
- 281—Three New Termitophilus Beetles from British Guiana
W. M. Mann
Proc. Ent. Soc. Wash. 28 (7), p. 151

STATEMENT OF FUNDS PROVIDED BY
THE VARIOUS CITY ADMINISTRATIONS FOR THE DEVELOPMENT AND
MAINTENANCE OF THE ZOOLOGICAL PARK AND AQUARIUM
FROM THE ORGANIZATION OF THE SOCIETY TO THE PRESENT
1896 to 1928

MAYOR	COMPTROLLER	Year	MAINTENANCE		CORPORATE STOCK ISSUES	
			Park	Aquarium	Park	Aquarium
Robert A. Van Wyck 1898-1901	Bird S. Coler 1898-1901	1899	\$30,000.00	.....	.....	.....
		1900	40,000.00	.....	\$125,000.00	.....
		1901	65,000.00	.....	300,000.00	.....
		1902	85,000.00	\$ 5,959.97	250,000.00	.....
Seth Low 1902-1903	E. M. Grout 1902-1903	1903	104,965.00	46,453.68	250,000.00	\$30,000.00
		1904	104,965.00	46,439.72	275,000.00	40,000.00
G. B. McClellan 1904-1909	E. M. Grout 1904-1906	1905	134,965.00	44,968.50	275,000.00	.....
		1906	144,965.00	44,987.71	250,000.00	.....
	Herman A. Metz 1907-1909	1907	141,558.75	44,183.87	100,000.00	.....
		1908	154,627.00	44,157.27	65,000.00	.....
		1909	162,325.00	45,971.44	10,000.00	.....
		1910	167,632.00	45,974.86	89,500.00	.....
W. J. Gaynor 1910-1913 Ardolph L. Kline 1913	W. A. Prendergast 1910-1913	1911	174,632.00	47,560.21	155,000.00	.....
		1912	182,365.00	46,597.08	.....	.....
		1913	191,925.00	47,335.62	.....	29,100.00
		1914	200,000.00	46,995.53	.....	.....
J. P. Mitchel 1914-1917	W. A. Prendergast 1914-1917	1915	200,000.00	46,991.66	21,425.00	.....
		1916	197,074.35	46,996.43	.....	.....
		1917	199,560.00	46,903.61	.....	.....
		1918	207,586.00	48,630.71	.....	.....
J. F. Hylan 1918 to 1926	C. L. Craig 1918 to 1926	1919	190,000.00	45,000.00	5,000.00	.....
		1920	250,098.27	53,971.48	15,000.00	.....
		1921	276,951.01	65,203.12	.....	.....
		1922	264,618.05	63,341.26	.....	25,000.00
		1923	264,515.00	59,226.00	.....	86,000.00
		1924	264,514.49	58,309.00	.....	7,970.00
		1925	264,514.49	58,334.00	52,000.00	33,000.00
		1926	274,280.00	62,348.00	.....	1,500.00
James J. Walker 1927 to 1930	Charles W. Berry 1927 to 1930	1927	277,280.00	65,228.00	.....	.....
		1928	307,280.00	66,878.00	.....	.....
Totals			\$5,523,196.41	\$1,344,946.73	\$2,237,925.00	\$252,570.00

Note: The appropriations for each year are granted by the Board of Estimate the previous year.



SUMMARY OF EXPENDITURES, 1896 to 1927, NEW YORK ZOOLOGICAL SOCIETY AND THE CITY OF NEW YORK

ON ACCOUNT OF THE DEVELOPMENT AND MAINTENANCE OF THE ZOOLOGICAL PARK AND THE AQUARIUM, INCLUDING THE PURCHASE OF COLLECTIONS AND ALSO FOR THE SCIENTIFIC AND GENERAL PURPOSES OF THE SOCIETY.

Year	EXPENDED BY THE CITY OF NEW YORK			FROM GATE RECEIPTS		EXPENDED BY THE NEW YORK ZOOLOGICAL SOCIETY										
	Zoological Park Maintenance	Aquarium Maintenance	Bond Issues a/c—Park and Aquarium	Construction and Repairs	Purchase of Animals	Zoological Park Development	Aquarium Improvements	Zoological Park Maintenance	Aquarium Maintenance	Purchase of Animals	Aquarium Specimens	Heads and Horns Collection	Pension Fund Contribution	Library and Paintings	Scientific and General Purposes	
1896	.....	.....	.....	.....	.....	\$ 4,213.63	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897	.....	.....	.....	.....	.....	6,424.61	.....	.....	.....	.....	.....	.....	.....	.....	\$ 2,903.74
1898	.....	.....	.....	.....	.....	23,597.80	.....	\$ 1,292.16	.....	.....	.....	.....	.....	.....	4,339.20
1899	\$ 30,000.00	.....	.....	.....	.....	145,495.80	.....	7,038.61	.....	\$ 8,540.72	.....	.....	.....	\$ 102.76	3,476.02
1900	40,000.00	.....	\$125,000.00	.....	\$ 2,470.88	34,626.24	.....	6,189.33	.....	3,784.32	.....	.....	.....	88.13	5,601.78
1901	65,000.00	.....	300,000.00	.....	2,998.80	18,348.61	.....	3,714.37	.....	11,652.24	.....	.....	.....	462.20	7,597.16
1902	85,000.00	\$ 5,959.97	250,000.00	.....	4,256.50	5,908.69	.....	2,757.57	.....	20,983.07	.....	.....	.....	224.73	11,068.69
1903	104,965.00	46,453.68	280,000.00	.....	5,912.95	1,038.20	.....	.....	.....	20,361.62	.....	.....	.....	456.03	13,608.10
1904	104,965.00	46,439.72	315,000.00	.....	5,421.90	1,013.87	.....	1,894.37	.....	14,299.61	.....	.....	.....	887.16	15,072.84
1905	134,965.00	44,968.50	275,000.00	.....	6,849.00	144.00	.....	.....	.....	20,643.40	.....	.....	.....	418.10	18,773.90
1906	144,965.00	44,987.71	250,000.00	.....	8,132.35	778.48	.....	.....	.....	14,907.36	.....	.....	.....	319.16	17,961.67
1907	141,558.75	44,183.87	100,000.00	.....	8,248.65	370.72	.....	.....	.....	10,606.03	.....	\$ 892.71	.....	644.05	15,999.68
1908	154,627.00	44,157.27	65,000.00	.....	9,446.40	232.27	.....	.....	.....	4,231.61	.....	735.77	.....	1,313.87	14,693.92
1909	162,325.00	45,971.44	10,000.00	.....	9,992.75	2,860.92	.....	.....	.....	9,734.43	.....	7,340.82	.....	609.56	17,168.95
1910	167,632.00	45,974.86	89,500.00	.....	9,909.90	5,918.35	.....	.....	.....	4,339.25	\$ 973.90	2,036.39	.....	1,021.87	20,627.77
1911	174,632.00	47,560.21	155,000.00	.....	11,611.15	1,155.00	.....	.....	.....	6,659.89	1,191.80	1,615.38	.....	1,221.26	23,409.39
1912	182,365.00	46,597.08	.....	.....	11,838.40	40.00	.....	.....	.....	22,750.18	1,350.03	556.94	.....	1,031.55	32,109.01
1913	191,925.00	47,335.62	29,100.00	.....	12,404.25	218.45	.....	.....	.....	10,665.57	1,850.25	486.00	.....	732.97	32,543.88
1914	200,000.00	46,995.53	.....	\$ 9,237.81	3,831.15	2,175.13	.....	.....	.....	22,590.44	1,792.99	338.73	\$3,333.33	3,541.15	28,246.42
1915	200,000.00	46,991.66	21,425.00	9,175.86	.....	887.88	.....	.....	.....	13,629.41	1,466.64	1,024.91	8,000.00	4,181.24	31,398.08
1916	197,074.35	46,996.43	.....	9,599.81	.....	425.30	.....	.....	.....	13,511.12	2,193.57	1,031.47	8,000.00	1,555.12	38,339.99
1917	199,560.00	46,903.61	.....	3,488.31	7,118.90	1,450.05	.....	11,537.79	.....	10,175.70	1,637.15	18.12	8,000.00	2,869.20	44,262.48
1918	207,586.00	48,630.71	.....	2,642.70	.....	48.12	.....	1,580.00	\$ 93.61	8,425.92	960.19	18.61	8,000.00	3,559.85	34,125.49
1919	190,000.00	45,000.00	5,000.00	4,917.84	.....	.....	\$ 3,450.00	19,924.00	407.07	13,345.59	1,028.05	88.27	8,000.00	1,442.07	45,599.71
1920	250,098.27	53,971.48	15,000.00	17,438.28	.....	5,007.00	4,095.03	5,141.92	.....	32,761.08	1,654.02	263.86	8,000.00	2,517.64	51,018.20
1921	276,951.01	65,203.12	86,000.00	25,463.77	.....	88,734.92	53,635.02	6,068.17	.....	27,442.59	2,165.05	2,661.67	8,000.00	4,698.24	55,684.15
1922	264,618.05	63,341.26	25,000.00	17,060.00	.....	50,888.65	16,153.03	10,074.88	3,326.28	43,047.41	3,057.91	7,191.93	8,000.00	1,765.78	58,797.69
1923	262,724.50	57,166.63	.....	18,388.20	.....	5,000.00	.....	19,019.09	3,319.44	24,456.20	1,432.89	1,550.69	8,000.00	3,391.96	58,404.21
1924	262,471.01	57,319.20	7,970.00	16,806.00	.....	.....	32,272.21	28,956.34	8,097.14	11,560.62	2,013.88	942.34	8,000.00	1,938.77	76,559.41
1925	262,808.69	58,324.89	85,000.00	19,974.05	.....	.....	.....	38,793.01	4,380.45	20,843.01	2,609.55	667.78	8,000.00	1,174.24	242,753.89
1926	273,815.12	62,266.20	1,500.00	20,102.90	.....	.....	.....	45,467.10	7,261.21	23,460.04	2,847.35	306.32	8,000.00	562.40	87,915.27
1927	276,855.19	65,216.89	.....	18,960.48	.....	.....	1,395.00	61,968.22	11,656.97	27,545.92	2,861.55	135.00	8,000.00	2,477.37	82,807.54
Add premium on Bonds, less Balances reverting to the City			35,559.89													
Expended in connection with preparation and publication of "A Monograph of the Pheasants" — gift of Col. Anthony R. Kuser															194,100.00	
Expended in connection with Galapagos Expedition — gift of Harrison Williams															98,670.00	
Totals..||\$5,209,486.94||\$1,274,917.54||\$2,526,054.89|| \$193,256.01 | \$120,443.93 || \$407,002.69 | \$111,000.29 | \$271,416.93 | \$39,518.64 | \$476,954.35 | \$33,086.77 | \$29,903.71 | \$107,333.33 | \$45,208.43 | \$1,485,638.23																
			\$9,010,459.37			\$313,699.94										\$3,007,033.37

CLASSIFIED SUMMARY OF EXPENDITURES FOR THE YEAR 1927, NEW YORK ZOOLOGICAL SOCIETY

	PARK MAINTENANCE		AQUARIUM MAINTENANCE		NEW YORK ZOOLOGICAL SOCIETY FUNDS						GRAND TOTAL	
	From City Funds		From City Funds		Special Funds		General Income Fund		Scientific & Research		Salaries	Other Items
	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items	Salaries	Other Items		
Zoological Park: Maintenance by City												
Administration.....	\$28,058.75	-----	-----	-----	-----	-----	-----	-----	-----	-----	\$28,058.75	-----
Care of Buildings and Collections.....	89,195.38	-----	-----	-----	-----	-----	-----	-----	-----	-----	89,195.38	-----
Care of Grounds.....	80,146.06	-----	-----	-----	-----	-----	-----	-----	-----	-----	80,146.06	-----
Supplies.....	-----	\$59,725.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	\$59,725.00
Equipment.....	-----	4,125.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	4,125.00
Materials.....	-----	10,175.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	10,175.00
Miscellaneous.....	-----	5,430.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	5,430.00
Repairs of Permanent Improvements.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Repairs to Roof of Elephant House.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Gate Receipts												
Construction and Repairs.....	-----	-----	-----	-----	\$15,422.88	\$ 3,537.60	-----	-----	-----	-----	15,422.88	3,537.60
Contributions by Society												
Maintenance.....	-----	-----	-----	-----	-----	-----	\$41,486.87	\$20,481.35	-----	-----	41,486.87	20,481.35
Administration.....	-----	-----	-----	-----	-----	-----	14,100.00	9,514.50	-----	-----	14,100.00	9,514.50
Purchase of Animals.....	-----	-----	-----	-----	-----	27,545.92	-----	-----	-----	-----	-----	27,545.92
Scientific Purposes.....	-----	-----	-----	-----	-----	285.00	-----	439.80	\$11,309.92	\$23,214.11	11,309.92	23,938.91
Heads and Horns Collection.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	135.00	-----	135.00
Insurance.....	-----	-----	-----	-----	-----	-----	-----	5,761.97	-----	-----	-----	5,761.97
Membership Expenses.....	-----	-----	-----	-----	-----	-----	2,400.00	5,998.68	-----	-----	2,400.00	5,998.68
Pension Contributions.....	-----	-----	-----	-----	-----	-----	9,014.49	-----	-----	-----	9,014.49	-----
Miscellaneous Expenditures.....	-----	-----	-----	-----	-----	2,005.50	540.00	2,994.54	-----	-----	540.00	5,000.04
Aquarium: Maintenance by City												
Plumbing, Heating and Interior Equipment.....	-----	-----	\$49,709.85	\$15,507.04	-----	-----	-----	-----	-----	-----	49,709.85	15,507.04
Completion of Reconstruction.....	-----	-----	-----	1,457.88	-----	-----	-----	-----	-----	-----	-----	1,457.88
	-----	-----	-----	12,553.15	-----	-----	-----	-----	-----	-----	-----	12,553.15
Contributions by Society												
Maintenance.....	-----	-----	-----	-----	-----	-----	10,085.83	1,571.14	-----	-----	10,085.83	1,571.14
Insurance.....	-----	-----	-----	-----	-----	-----	-----	1,196.85	-----	-----	-----	1,196.85
Aquarium Specimens.....	-----	-----	-----	-----	-----	-----	-----	2,861.55	-----	-----	-----	2,861.55
Miscellaneous Expenditures.....	-----	-----	-----	-----	-----	-----	120.00	1,449.35	-----	-----	120.00	1,449.35
Totals	\$197,400.19	\$79,455.00	\$49,709.85	\$29,518.07	\$15,422.88	\$33,374.02	\$77,747.19	\$52,269.73	\$11,309.92	\$23,349.11	\$351,590.03	\$217,965.93
Totals by Funds	\$276,855.19		\$79,227.92		\$48,796.90		\$130,016.92		\$34,659.03		\$569,555.96	

FINANCIAL SUMMARY

The financial administration of the Zoological Society is under the Treasurer, the Executive Committee and the Finance Committee.

The *City Funds* are derived under the vote of the Board of Estimate and Apportionment, from the City of New York, as follows:

City Zoological Park Building Fund
Zoological Park Maintenance Fund
Aquarium Maintenance Fund
City Aquarium Building Fund

The total appropriation by the City for these purposes during the year 1927 was \$342,508.00, which was expended as accounted for in this Report.

The *Zoological Society Funds* are divided into:

(1) The "Endowment Funds," including:

General Endowment Fund.....	now totaling	\$615,527.59
Rockefeller Endowment Fund.....	" "	1,000,233.53
Sage Endowment Fund.....	" "	640,855.82
George F. Baker Endowment Fund.....	" "	100,000.00
Jacob H. Schiff Endowment Fund.....	" "	50,000.00
Cadwalader Endowment Fund.....	" "	20,000.00
Florence Lydig Sturgis Endowment Fund..	" "	10,000.00
Stokes Bird Endowment Fund.....	" "	5,000.00
Carnegie Pension Endowment Fund.....	" "	100,066.25

(*The above amounts are as of December 31, 1927*)

(2) "Special Funds," including gifts from year to year from members and friends of the Society, which are divided into accounts as follows:

Animal Account, for 1927, derived from special endowment gifts and receipts of privileges..... \$22,094.67
Art Gallery Account, for the purchase of Animal Paintings 1,750.00

The Society's funds and gifts also include:

(3) The Park and Aquarium building accounts are derived either from gate receipts, special contributions or from its endowment.

The expenditures from these building accounts for the past year were as follows:

Zoological Park Improvement and Repair Account, de-

rived by authority from Gate Receipts..... \$18,906.48

and (4) The "Scientific Research and Publication Fund" divided as follows:

1927 EXPENDITURES ON EXPLORATION AND PUBLICATION

Publication Account	\$15,552.93
Tropical Research Station Account.....	18,499.23
Library Account	471.87
Heads and Horns Collection Account.....	135.00

This financial summary shows that during the year 1927 from endowment, from contributions and from publication funds the Society has expended a grand total of \$211,123.00. For the continuation of this work, of such great public benefit in the Park and Aquarium, and of such great scientific and literary value in its publications, the Society requires the immediate addition of \$2,000,000 to its general endowment and the constant attention of its members and friends for the needs of its Library, of its Heads and Horns Collection, of its Publications, of its Animal Painting Gallery, etc.

Communications and contributions to the Endowment Fund or Building Fund should be addressed either to the

Secretary of the New York Zoological Society, 27 Pine Street, or to the

Treasurer of the New York Zoological Society, care of the Farmers' Loan and Trust Company, 20-22 William Street.

The form of gift or bequest is printed on page ix of this Report.

Treasurer's Reports

FOR THE YEAR ENDING DECEMBER 31, 1927

CORNELIUS R. AGNEW, *Treasurer*
22 William Street
New York City

GROUP 1

Maintenance Fund

ZOOLOGICAL PARK ACCOUNT

INCOME

Received from the City of New York on account of Park Maintenance Appropriation of \$277,280.00 for the year.....	\$260,830.56
Due from the City on Account of Park Maintenance Appropriation	16,024.63
Shortage in City Maintenance Appropriation for 1927 (Paid by the New York Zoological Society)	61,968.22
	<hr/>
	\$338,823.41

EXPENDITURES

Personal Service:

General administration	\$28,058.75	
Maintenance of buildings and care of collections	89,195.38	
Maintenance and care of grounds.....	80,146.06	
Salaries in excess of City Appropriation.....	41,486.87	\$238,887.06

Supplies:

Food for animals	\$40,976.71	
Fuel	21,713.47	
Fuel oil	73.50	
Office supplies	554.34	
Stationery and printing.....	1,187.22	
Drugs and medicines	117.98	
Medical and surgical supplies.....	143.28	
Disinfectants	172.54	
Janitors' supplies	141.93	
Motor vehicle supplies	600.00	
Ice	72.10	
Lubricating oils	3.80	
Nursery stock and seeds.....	179.75	
Nursery supplies	10.60	
Miscellaneous supplies	1,432.98	67,380.20

Equipment:

Uniforms and wearing apparel.....	\$3,012.62	
Office equipment	667.46	
Motor vehicles and equipment.....	1,047.98	
Awnings and shades	60.37	
Janitors' equipment	543.56	
Mats and floor coverings.....	7.00	
Painters' equipment	73.96	
Rubber hose	86.00	
Tools and machinery	365.37	
Miscellaneous equipment	778.07	6,642.39

Materials:

Motor vehicle materials	\$176.85	
Bolts, nails and hardware	880.83	
Electrical materials	318.38	
Fencing and netting	1,461.38	
Furnace materials	490.24	
Glaziers' materials	146.68	
Lumber	2,568.12	
Paints and oils	2,080.29	
Plumbing materials	1,232.32	
Sand, cement and brick	667.10	
Steel and iron	856.78	
Miscellaneous materials	5,930.27	16,809.24

Contract or Open Order Service:

Apparatus and machinery repairs	\$158.21	
Harness and vehicle repairs.....	20.50	
Painting labels	52.00	
Plumbing repairs	2,054.29	
Sanitary service	130.00	
Miscellaneous repairs	259.52	
Motor vehicle repairs	90.00	
Electric service	3,679.33	
Gas service	76.80	
Telephone service	1,577.79	
Expressage and deliveries	361.59	8,460.03

Contingencies:

Medical attendance, employees.....	\$265.00	
Medical attendance, animals	33.00	
Miscellaneous expenses	346.49	644.49
		<hr/>
		\$338,823.41

GROUP I

Maintenance Fund
AQUARIUM ACCOUNT

INCOME

Received from the City of New York on account Aquarium Maintenance Appropriation \$65,228.00 for the year.....	\$59,259.54
Due from the City on account of Aquarium Maintenance Appropriation	5,957.35
Shortage in City Maintenance Appropriation for 1927 (Paid by the New York Zoological Society)	11,656.97
	<hr/> \$76,873.86

EXPENDITURES

Salaries and Wages.....	\$49,709.85
Salaries in excess of City Appropriation.....	10,085.83
Forage and Veterinary Supplies	4,518.63
Fuel Supplies	6,748.12
Office Supplies	179.21
Laundry, Cleaning and Disinfecting Supplies.....	228.18
Refrigerating Supplies	221.11
General Plant Supplies	852.40
Wearing Apparel	235.15
Office Equipment	309.00
General Plant Equipment	1,222.90
General Plant Materials	846.94
Repairs and Replacements	921.75
Telephone Service	243.63
Expressage and Cartage	316.00
Contingencies	235.16
	<hr/> \$76,873.86

M. C. FENSTEMAKER, *Clerk.*

GROUP II

Endowment Fund

GENERAL ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$361.26	
Investments at cost	613,442.33	\$613,803.59

RECEIPTS

Estate of Harry Mayer	\$500.00	
Life Memberships	1,900.00	2,400.00

Loss on sale of securities.....		\$616,203.59
		\$676.00

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$611,317.33	
Uninvested balance	4,210.26	615,527.59

 \$616,203.59

ROCKEFELLER ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$374.87	
Investments at cost	999,703.63	\$1,000,078.50

RECEIPTS

Profit on sale of bonds.....		155.03
		<hr/> \$1,000,233.53

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$999,797.66	
Uninvested balance	435.87	\$1,000,233.53
		<hr/> \$1,000,233.53

SAGE ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$4,680.77	
Investments at acquired values.....	630,270.36	\$634,951.13

RECEIPTS

Profit on sale of securities.....		5,934.69
		<hr/> \$640,885.82

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$635,595.05	
Uninvested balance	5,290.77	\$640,885.82
		<hr/> \$640,885.82

GROUP II

Endowment Fund

GEORGE F. BAKER ENDOWMENT FUND

Funds as of December 31, 1926:

Cash in bank	\$87.75	
Investments at cost	99,912.25	\$100,000.00
	<hr/>	

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$99,912.25	
Uninvested balance	87.75	\$100,000.00
	<hr/>	

JACOB H. SCHIFF ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$525.00	
Investments at cost	49,475.00	\$50,000.00
	<hr/>	

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$49,475.00	
Uninvested balance	525.00	\$50,000.00
	<hr/>	

GROUP III

Special Endowment Fund

CADWALADER ANIMAL ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$4,946.58	
Investments at cost	20,000.00	\$24,946.58

RECEIPTS

Interest on investments		1,000.00
		<u>\$25,946.58</u>

EXPENDITURES

Purchase of animals	\$2,184.75	
Miscellaneous expenses	921.95	\$3,106.70

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$20,000.00	
Unexpended balance	2,839.88	22,839.88
		<u>\$25,946.58</u>

FLORENCE LYDIG STURGIS ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$1,514.31	
Investments at cost	9,987.50	\$11,501.81

RECEIPTS

Interest on investments		550.00
		<u>\$12,051.81</u>

EXPENDITURES

Apparatus for treatment of birds		\$285.00
--	--	----------

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$9,987.50	
Unexpended balance	1,779.31	11,766.81
		<u>\$12,051.81</u>

STOKES BIRD ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Cash in bank	\$808.54	
Investments at cost	5,056.46	\$5,865.00

RECEIPTS

Interest on investments		200.00
		<u>\$6,065.00</u>

GROUP III

Special Endowment Fund

STOKES BIRD ENDOWMENT ACCOUNT—(Continued)

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$5,056.46	
Unexpended balance	1,008.54	\$6,065.00
		<hr/>
		\$6,065.00

CARNEGIE PENSION ENDOWMENT ACCOUNT

Funds as of December 31, 1926:

Investments at cost	\$100,066.25
---------------------------	--------------

Funds as of December 31, 1927:

Investments at cost (for details see list of securities)	\$100,066.25
--	--------------

GROUP IV

Special Fund

ANIMAL ACCOUNT

Unexpended balance as of December 31, 1926:

Cash in bank	\$26,341.46	
Cash on hand	100.00	\$26,441.46
		<hr/>

RECEIPTS

Junior Auxiliary 500.00

Receipts from park:

Privilege Department (1927 receipts)	\$15,000.00	
Sale of animals	6,550.00	
Checking	30.45	
Miscellaneous receipts	14.22	21,594.67
		<hr/>
		\$48,536.13

EXPENDITURES

Purchase of animals:

Mammals	\$15,561.13	
Birds	5,959.27	
Reptiles	2,053.37	
Insects	115.00	\$23,688.77
		<hr/>

Express and other charges	\$485.91	
Traveling and other expenses.....	264.54	750.45
		<hr/>

Unexpended balance as of December 31, 1927:

Cash on hand	\$100.00	
Cash in bank	23,996.91	24,096.91
		<hr/>
		\$48,536.13

GROUP IV

Special Fund**ART GALLERY ACCOUNT**

Unexpended balance as of December 31, 1926.....	\$8,328.73
---	------------

RECEIPTS

George C. Clark.....	\$250.00	
Charles F. Dieterich	250.00	
Anthony R. Kuser	250.00	
Ogden Mills	250.00	
Percy R. Pyne	250.00	
Mortimer L. Schiff	250.00	
Irving K. Taylor	250.00	1,750.00

\$10,078.73

EXPENDITURES

Oil paintings	\$2,000.00	
Miscellaneous expenses	5.50	\$2,005.50

Unexpended balance as of December 31, 1927.....	8,073.23
---	----------

\$10,078.73

IMPROVEMENT AND REPAIR ACCOUNT

Unexpended balance as of December 31, 1926.....	\$332.06
---	----------

RECEIPTS

Gate Receipts	19,796.75
---------------------	-----------

\$20,128.81

EXPENDITURES

Antelope house water main trenches.....	\$1,471.15	
Boilers and repairs	1,198.50	
Bronx river road construction	1,439.60	
Cage repairs	2,180.50	
Fence repairs	1,962.90	
Guard wires	599.20	
Mammal pond fence rehabilitation	759.65	
Painting	1,719.00	
Reptile house cage	1,052.44	
Service building living quarters.....	610.36	
Walk repairs	2,830.40	
Miscellaneous repairs	3,136.78	\$18,960.48

Unexpended balance as of December 31, 1927.....	1,168.33
---	----------

\$20,128.81

GROUP V

General Income Fund

Unexpended balance as of December 31, 1926..... \$5,678.92

RECEIPTS

Income from General Endowment.....	\$26,805.00	
Income from Rockefeller Endowment.....	48,867.16	
Income from Sage Endowment	35,163.10	
Income from Baker Endowment.....	5,000.00	
Income from Schiff Endowment.....	2,412.50	
Interest on bank balances	976.56	119,224.32

Annual Dues	\$22,125.00	
Sustaining Membership Dues	120.00	22,245.00

Vita Glass Fund Subscriptions	\$2,100.00	
American Museum of Natural History	400.00	
Mrs. Grace Rainey Rogers	100.00	2,600.00

EXPENDITURES

General office expenses	\$7,340.13	
Stationery, printing and office supplies	2,674.37	
Salary of Chairman	7,000.00	
Salary of Secretary	3,500.00	\$20,514.50

Treasurer's office expenses	\$2,100.00	
Audit of accounts	1,000.00	3,100.00

Annual report	\$5,306.21	
Annual meeting expenses	1,058.19	
Reception expenses	1,134.28	
Membership committee expenses	900.00	8,398.68

Zoological Park Maintenance Salaries in excess of City Appropriation (transfer)	\$41,486.87	
Zoological Park Maintenance Supply Deficit (transfer)	20,481.35	
Zoological Park Insurance	5,761.97	
Vita Glass	439.80	68,169.99

Aquarium Maintenance Salaries in excess of City Appropriation (transfer)	\$10,085.83	
Aquarium Maintenance Supply Deficit (transfer)....	1,571.14	
Aquarium Specimens	2,861.55	
Aquarium expenses	174.55	
Aquarium insurance	1,196.85	
Aquarium engineer's services	1,395.00	17,284.92

Pension Fund Income Account.....	\$3,665.00	
Aid to employees	5,349.49	9,014.49

Publication account (transfer)	\$15,500.00	
Library account (transfer)	500.00	
Heads and Horns account (transfer)	500.00	16,500.00

Miscellaneous expenses		3,534.54
------------------------------	--	----------

Unexpended balance as of December 31, 1927.....		\$146,517.12
		3,231.12

\$149,748.24

GROUP VI

Scientific and Research Fund**PUBLICATION ACCOUNT**

Unexpended balance as of December 31, 1926..... \$111.06

RECEIPTS

General Income Fund (transfer).....	\$15,500.00	
Sale of "Our Vanishing Wild Life".....	22.50	
Sale of "Tropical Wild Life in British Guiana".....	107.47	\$15,629.97
		<hr/>
		\$15,741.03

EXPENDITURES

Bulletin	\$8,968.25	
Zoologica	4,940.71	
Zoopathologica	77.17	
Photographs and slides	1,566.80	\$15,552.93
		<hr/>
Unexpended balance as of December 31, 1927.....		188.10
		<hr/>
		\$15,741.03

TROPICAL RESEARCH ACCOUNT

Unexpended balance as of December 31, 1926..... \$9,500.00

RECEIPTS

Marshall Field	\$2,000.00	
Ogden Mills	2,000.00	
George F. Baker	1,000.00	
Robert S. Brewster	1,000.00	
Edward S. Harkness	1,000.00	
George D. Pratt	1,000.00	
Mortimer L. Schiff	1,000.00	9,000.00
		<hr/>
		\$18,500.00

EXPENDITURES

Salaries	\$8,309.92	
Laboratory supplies	993.09	
Stationery and office supplies.....	24.65	
Subsistence	1,053.68	
Lease of Schooner	5,200.00	
Traveling and other expenses.....	661.29	
Miscellaneous supplies	1,110.74	
Miscellaneous Expenses	1,145.86	\$18,499.23*
		<hr/>
Unexpended balance as of December 31, 1927.....		.77
		<hr/>
		\$18,500.00

* In addition to the expenditures from the Zoological Society's funds, as shown above, Mr. Beebe reports that an additional amount of \$5,325.80 was contributed on his own account and expended for the Expedition, making the total cost \$23,825.03.

GROUP VI

Scientific and Research Fund

LIBRARY ACCOUNT

Unexpended balance as of December 31, 1926.....	\$5.47
---	--------

RECEIPTS

General Income Fund (transfer).....	500.00
-------------------------------------	--------

\$505.47

EXPENDITURES

Books, pamphlets, etc.....	\$273.60	
Subscription to periodicals	181.27	
Express and other charges	1.50	
Miscellaneous expenses	15.50	\$471.87

Unexpended balance as of December 31, 1927.....	33.60
---	-------

\$505.47

HEADS AND HORNS COLLECTION ACCOUNT

Unexpended balance as of December 31, 1926.....	\$114.23
---	----------

RECEIPTS

General Income Fund (transfer).....	500.00
-------------------------------------	--------

\$614.23

EXPENDITURES

Miscellaneous expenses	\$135.00
Unexpended balance as of December 31, 1927.....	479.23

\$614.23

GALAPAGOS TORTOISE ACCOUNT

RECEIPTS

Anson W. Hard	\$1,000.00	
Anthony R. Kuser	1,000.00	\$2,000.00

Unexpended balance as of December 31, 1927.....	\$2,000.00
---	------------

H. R. MITCHELL, *Chief Clerk* CORNELIUS R. AGNEW, *Treasurer.*
January 1, 1928.

Department of Parks, Bronx -- City of New York**NEW YORK ZOOLOGICAL PARK**

Code N. D. P. 332 S.—Construction of Walks and Guard Rails and Restoration and Replanting of West Bank of Bronx River.

Approved by the Board of Estimate, July 18, 1919... \$5,000.00

EXPENDITURES DURING 1924 AND 1925

Personal Service	\$1,600.00	
Materials	2,434.71	\$4,034.71
		<hr/>
		\$965.29

ENCUMBRANCE, 1927

Open Market Order 1927.....	910.00
	<hr/>

Unencumbered balance December 31, 1927.....	\$55.29
---	---------

Code N. D. P. 332 T.—Construction of a Machinery Shed and a General Storage Shed, including Architect's fees.

Approved by the Board of Estimate June 11, 1920.... \$15,000.00

EXPENDITURES DURING 1923, 1924 AND 1925

Personal Service	\$270.00	
Dinney-Newgarden Company	13,200.00	
Fred Sauvan, Hot Water Heating System.....	1,100.00	
Electricity installed	285.00	
Plumbing Materials	50.10	\$14,905.10
		<hr/>
		\$94.90

Rescinded May 12, 1927.....	94.90
	<hr/>

Unencumbered balance December 31, 1927.....
---	-------

Code R. D. P. 115 A.—Repairs and Replacements of Permanent Improvements in New York Zoological Park. All obligations contracted for hereunder to be incurred on or before December 31, 1925

Adopted by the Board of Aldermen June 23, 1925, and approved by the Board of Estimate, July 31, 1925	
Time extended to June 30, 1926.....	\$30,000.00
Rescinded December 2, 1926.....	175.73
	<hr/>
	\$29,824.27

EXPENDITURES DURING 1925 AND 1926

Personal Service	\$13,549.70	
Materials	16,267.21	29,816.91
		<hr/>

Rescinded November 22, 1927.....	\$7.36
Unexpended balance December 31, 1927.....	.....

Code R. D. P. 115 B.—Repairs and replacements to roof and dome of Elephant House, in New York Zoological Park, all obligations contracted for hereunder to be incurred on or before December 31, 1925.

Adopted by the Board of Alderman, June 23, 1925, and approved by the Board of Estimate July 31, 1925	
Extended to June 30, 1927, Bd. Ald. 3-8-1927 Bd.	
Est. & App. May 5, 1927. Cal. No. 34.....	\$22,000.00

EXPENDITURES DURING 1926

Chrystie Cornice & Skylight Work, Inc.....	\$12,994.00
	<hr/>
	\$9,006.00

ENCUMBRANCES 1927

Brooklyn Cornice and Skylight Work.....	1,990.00
	<hr/>
Unencumbered balance December 31, 1927.....	\$7,016.00

December 31, 1927 JOHN H. BERGEN, *Chief Clerk*,
Department of Parks, Borough of the Bronx

Department of Parks, Manhattan--City of New York

AQUARIUM—ALTERATIONS

Code C. D. P. 4 A.—Construction of an additional story to the Aquarium

Approved by the Board of Estimate and Apportionment, Dec. 28, 1921..... \$75,000.00

EXPENDITURES

Contract, Thos. A. Reilly Co., for the construction of additional story to Aquarium.....	\$73,773.30	
Open Market Order for Blue Prints, Electro Sun Co.	7.00	73,780.30
	<hr/>	<hr/>
		\$1,219.70

Code C. D. P. 4 B.—Plumbing, heating and interior equipment for additional story to Aquarium.

Approved by the Board of Estimate and Apportionment, December 28, 1921..... \$11,000.00

EXPENDITURES

Contract, John Smith, for plumbing.....	\$720.00	
Contract, S. L. Snyder Co., for plumbing.....	1,082.00	
Contract, Henry Bing, for heating.....	1,985.00	
O. M. O. Thos. A. Reilly Co., relocate electrical equipment	850.00	
O. M. O. Thos. A. Reilly Co., stairs, partitions, etc...	875.00	
O. M. O. Jos. Barrie Co., Electrical Work.....	920.00	
O. M. O. Thos. A. Reilly Co., Toilet room, 2nd Floor.	833.00	
O. M. O. S. L. Snyder Co., for plumbing work.....	110.00	
O. M. O. Jos. L. Burke Corp., marble work.....	899.00	
O. M. O. S. L. Snyder Co., for plumbing work.....	130.00	
O. M. O. Henry Bing, for heating work.....	25.00	
O. M. O. Wm. J. Olvany, Inc., for heating.....	357.00	
O. M. O. Remo Realty Co., plumbing and heating...	314.88	
O. M. O. Wm. Knopp Electric Co., Electrical work...	386.00	
O. M. O. Remo Realty Co., gutters, etc.....	200.00	9,686.88
	<hr/>	<hr/>
Unexpended balance as of December 31, 1927.....		\$1,313.12

ENCUMBRANCES

O. M. O. P. H. Keogan, electrical work.....	875.00	875.00
	<hr/>	<hr/>
Unencumbered balance as of Dec. 31, 1927.....		\$438.12

Code N. D. P. 4 C.—Completion of reconstruction of Aquarium.

Approved by Board of Estimate and Apportionment, January 29, 1925	\$33,000.00
Approved by Board of Estimate and Apportionment, March 25, 1926.....	1,500.00

 \$34,500.00

EXPENDITURES

O. M. O. N. Y. Letter Co., printing specifications....	\$61.05	
Contract, Remo Realty Co., completion of reconstruction	31,166.50	
Contract, English Construction Co., construction of East Wall	2,100.00	
O. M. O. John Price Jones, printing specifications....	16.91	33,344.46
Unexpended balance as of December 31, 1927.....		<hr/> \$1,155.54

JAMES A. SHERRY,
Auditor, Department of Parks,
Borough of Manhattan.

January 1, 1928.

SECURITIES OWNED BY NEW YORK ZOOLOGICAL SOCIETY

December 31, 1927

*Listed at Cost or Request Value***Endowment Fund**

GENERAL ENDOWMENT ACCOUNT

Bonds as follows:

\$50,000	American Tel. & Tel. Co., Collateral Trust 4%, 1929...	\$45,000.00
30,000	Amer. Tel. & Tel. Co. 20-yr. Skg. Fd. Debenture 5½%, 1943	29,475.00
4,000	Baltimore & Ohio RR. Co., 1st Mtge. 4%, 1948.....	3,120.00
3,000	Central RR. Co. of New Jersey, Gen. Mtge, 5%, 1987...	3,031.25
22,000	Chic., Mil. & Puget Sd. Ry. Co., 1st Mtge. Series A, 4%, 1949	20,775.00
20,000	Chicago & Northwestern Ry. Co., Gen. Mtge. 4%, 1987...	19,750.00
5,000	Colorado & Southern Ry. Co. 1st Mtge. 4%, 1929.....	4,750.00
15,000	Detroit Edison Co., Rfdg. 5%, 1949	14,625.00
20,000	Ill. Central RR., Chic., St. L. & N. O. RR. Co., Jt. 1st Rfdg. Series "A" 5%, 1963	20,083.75
5,000	Lackawanna Steel Co., 1st Cons. Conv. Series A, 5%, 1950	4,891.25
9,000	Lehigh Valley Terminal Ry. Co., 1st Mtge. 5%, 1941....	9,090.00
75,000	P. Lorillard Co., 5%, 1951	72,775.00
5,000	Mich. Cent. RR. Co., Mich. Air Line RR. 1st Mtge. 4%, 1940	4,950.00
20,000	Milwaukee, Sparta & No. West'n Ry. Co., 1st Mtge. 4%, 1947	18,900.00
5,000	Missouri & Ill. Bdg. & Belt RR. Co., 1st Mtge. 4%, 1951..	5,000.00
1,000	Morris & Essex RR. Co., 1st Rfdg. Mtge. 3½%, 2000....	876.25
25,000	New England Tel. & Tel. Co., 1st Series A 5%, 1952....	24,843.75
25,000	N. Y. & Westchester Ltg. Co., Gen. Mtge. 100-yr. 4%, 2004	19,750.00
25,000	Oregon Short Line RR. Co., 1st Cons. Mtge. 5%, 1946....	25,990.00
16,000	Pennsylvania RR. Co. Secured 40-yr. 4%, 1964.....	16,120.00
10,000	St. Paul, Minn. & Man. Ry. Co., Cons. Mtge. 4%, 1933...	9,800.00
80,000	Standard Oil Co. of N. J. 20-yr. Deb. 5%, 1946.....	80,603.13
47,000	Union Pac. RR. Co., 1st Mtge. RR. & L. G. 4%, 1947....	44,058.00
7,000	United New Jersey RR. & Canal Co., Gen. Mtge. 4%, 1944	6,230.00
75,000	United States Steel Corp., 10/60 yr. Skg. Fund 5%, 1963	77,814.95
20,000	Vandalia RR. Co., Cons. Mtge. Series B, 4%, 1957.....	19,400.00

Stocks as follows:

shares		
100	New York, Lackawanna & Western Ry. Co. Capital.....	9,615.00
		<hr/>
		\$611,317.33

SAGE ENDOWMENT ACCOUNT

Bonds as follows:

50,000	Central Pacific Ry. Co., 1st Rfdg. 4%, 1949.....	43,983.75
75,000	Chi., Burl. & Quincy RR. Co., 1st & Rfdg. Series A, 5%, 1971	75,605.00
6,000	Erie RR. Co., Prior Lien 4%, 1996.....	3,015.00
5,000	Ill. Central RR., Chic., St. L. & N. O. RR. Co., Jt. 1st Rfdg. Series "A" 5%, 1963.....	5,022.50
100,000	Indiana Steel Co., 1st Mtge. 5%, 1952.....	100,166.08
21,000	Interborough Rapid Transit Co., 1st & Rfdg. 5%, 1966..	13,413.75
75,000	Liggett & Myers Tobacco Co., Gold 5%, 1951.....	74,296.25
10,000	New Bruns. So. Ry. Co., 1st Mtge. 30-yr. Gold 3%, 1933	8,100.00
10,000	New York Central RR. Co., Cons. Mtge. Series A, 4%, 1998	8,034.00
50,000	N. Y. Central RR. Co., Rfdg. & Imp. Series C, 5%, 2013..	47,250.00
4,000	N. Y. State Rys. Co., 1st Cons. Mtge. Gold, Series A, 50-yr. 4½%, 1962	2,645.00
50,000	N. Y. Tel. Co. 1st & Gen. Mtge. Skg. Fund 4½%, 1939..	43,326.50
10,000	Ore.-Wash. RR. & Nav. Co., 1st & Rfdg. Mtge. Series A, 4%, 1961	6,500.00
15,000	Pennsylvania RR. Co. Secured 5%, 1964.....	15,018.75
5,000	Rochester Ry. & Light Co., Cons. Mtge. 5%, 1954.....	4,475.00
6,000	Schenectady Ry. Co., 1st Mtge. 30-yr. Series A, Gold 5%, 1946	3,690.00

Stock as follows:

shares		
95	American Tobacco Co., Preferred	10,319.37
200	Atchison, Topeka & Santa Fe Ry. Co., Preferred.....	14,525.00
52	Bankers Trust Co., Capital	19,500.00
51	Chicago & Northwestern Ry. Co., Common.....	3,190.69
500	Consolidated Gas Co. of N. Y., Cumulative Preferred...	47,000.00
126	Electric Bond & Share Securities Corp.....	.....
504	General Electric Co., Common	27,720.00
176	General Electric Co., Special	1,760.00
56	Illinois Central RR. Co., Capital.....	5,441.53
144	Pennsylvania RR. Co., Capital, Par \$50.....	4,887.00
220	Pullman Inc. Capital	9,636.00
100	Union Pacific RR. Co., Preferred	6,237.50
250	United States Steel Corp., Preferred	27,359.38
38	Western Union Telegraph Co., Capital.....	3,477.00

 \$635,595.05

ROCKEFELLER ENDOWMENT ACCOUNT

Bonds as follows:

\$50,000	Central Pacific Ry. Co., 1st Rfdg. Mtge. 4%, 1949.....	\$43,050.00
50,000	Chic., Bur. & Q. RR. Co., 1st & Rfdg. Mtge. Series A, 5%, 1971	49,322.50
100,000	Chicago & Northwestern Ry. Co., 1st & Rfdg. Mtge. 5%, 2037	104,018.75
100,000	Chesapeake & Ohio Ry., Genl. Mtge. 4½%, 1992.....	96,906.25
50,000	Lackawanna Steel Co., Conv. 1st Cons. Mtge. Series A, 5%, 1950	49,312.50
50,000	Lake Shore & Michigan Southern RR. Co., 4%, 1931.....	45,915.50
50,000	Liggett & Myers Tobacco Co., Gold 5%, 1951.....	48,243.75
25,000	P. Lorillard Co., Gold 5%, 1951.....	24,037.50
50,000	New England Tel. & Tel. Co., 1st Mtge. Series A, 5%, 1952	48,735.00
50,000	New England Telephone & Telegraph Co., 1st Series B, 4½%, 1961	47,225.00
40,000	New York Central RR. Co., Cons. Mtge. Series A, 4%, 1998	32,015.00
50,000	New York Central RR. Co., Rfdg. & Imp. Series C, 5%, 2013	47,562.50
50,000	N. Y. Tel. Co., 1st & Gen. Mtge. Skg. Fd. 4½%, 1939...	46,787.50
100,000	Southern Pacific Co., 20-yr. 5%, 1944.....	101,000.00
50,000	Union Pacific RR. Co., 1st RR. & Land Grant 4%, 1947..	45,693.75
50,000	United States Steel Corp., 10/60 yr. Skg. Fd. 5%, 1963...	51,218.28
18,000	Western Union Tel. Co., Fdg. & Real Est. 4½%, 1950....	16,899.50

Stocks as follows:

shares		
505	American Tobacco Co., Preferred.....	56,230.63
565	Morris & Essex RR. Co.....	45,623.75
		<hr/>
		\$999,797.66

GEORGE F. BAKER ENDOWMENT ACCOUNT

Bonds as follows:

\$50,000	National Tube Co., 1st Mtge. 5%, 1952.....	\$49,899.75
50,000	Pennsylvania RR. Co., Gen. Mtge. Series B, 5%, 1968....	50,012.50
		<hr/>
		\$99,912.25

JACOB H. SCHIFF ENDOWMENT ACCOUNT

25,000	American Telephone & Telegraph Co., S/F 5%, 1960 Bonds	\$25,250.00
300	Morris & Essex RR. Co. Stock.....	24,225.00
		<hr/>
		\$49,475.00

Special Endowment Fund**CADWALADER ANIMAL ENDOWMENT ACCOUNT**

\$20,000	Illinois Central RR. & Chicago, St. Louis & New Orleans RR. Co. Jt., 1st Rfdg. Mtge. Series A, 5% Bonds, 1963..	\$20,000.00
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FLORENCE LYDIG STURGIS ACCOUNT

\$10,000	American Tel. & Tel. Co., Skg. Fd. 5½%, 1943.....	\$9,987.50
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STOKES BIRD ENDOWMENT ACCOUNT

\$5,000	Illinois Central RR. Co., Rfdg. Mtge. 4% Bonds, 1955....	\$5,056.46
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CARNEGIE PENSION ENDOWMENT ACCOUNT*Bonds as follows:*

\$25,000	Chicago & Northwestern Ry. C., Gen. Mtge. 4%, 1987...	\$23,687.50
25,000	Illinois Central RR. Co., Rfdg. Mtge. 4%, 1955.....	23,062.50
25,000	Lehigh Coal & Nav. Co., Cons. Mtge. Skg. Fd. Series A, 4½%, 1954	24,875.00
1,000	Michigan Central RR. Co., Gold 3½%, 1952.....	817.50
5,000	Morris & Essex RR. Co., 1st Rfdg. Mtge. 3½%, 2000...	4,373.75
25,000	Philadelphia & Baltimore Central RR. Co., 1st Mtge. 4%, 1951	23,250.00
		<hr/>
		\$100,066.25

PENSION FUND INCOME ACCOUNT

Uninvested balance as of December 31, 1926:

Deposited with The Farmers' Loan & Trust Co.	\$7,893.77	
Deposited with the Corn Exchange Bank.....	80.15	7,973.92

Investments at Cost		124,684.00
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RECEIPTS

Interest on Bank Balances.....	\$76.89	
Interest on Investments	6,077.11	
Dues Collected from Zoological Society Employees...	3,889.00	10,043.00

Contributed by the N. Y. Zoological Society:

Income from Carnegie Endowment	4,335.00	
General Income Fund (transfer)	3,665.00	8,000.00

EXPENDITURES

Refund of dues, with accrued interest to resigning members	\$204.60	
Physical Examinations	110.00	
Clerical Services	300.00	
Pension Payments	11,272.94	\$11,887.54

Investments at Cost:

\$2,000 N. Y. Cen. RR. (Lake Shore Col.), 1998, 3½% Bonds	\$1,300.00	
3,000 Union Pacific RR., first 1947, 4% Bonds....	2,486.25	
5,000 Twenty-third St. Ry. Imp. & Ref. 1962, 5% Bonds	4,825.00	
5,000 Oregon Short Line RR., 1946, 5% Bonds...	4,945.00	
6,000 Buffalo General Elec., first 1939, 5% Ref. Bonds	5,640.00	
7,000 Chic. Milwaukee St. Paul Ry. Co., 1932, 4½% Bonds	5,368.75	
7,000 Lackawanna Steel Co., first 1950, 5% Bonds	6,847.75	
12,000 C. B. & Q. RR., Ill. Divn., 1949, 3½% Bonds	9,462.00	
12,000 Detroit Edison Co., 1949, 5% Ref. Bonds....	11,914.00	
13,000 B. & O. RR. Co., first 1948, 4% Bonds.....	11,322.75	
13,000 B. & O. (P. L. E. & W. Va. RR.), 1941, 4% Ref. Mtge. Bonds.....	10,506.25	
17,000 I. C. and St. L. & N. O. RR. Co., First Ref. 1963, 5% Bonds	16,838.00	
19,000 Michigan Central RR., first 1952, 3½% Bonds	15,416.00	
25,000 Liggett & Myers Tobacco Co., 1951, 5% Bonds	24,455.00	131,326.75

Uninvested balance, December 31, 1927:

Deposited with The Farmers' Loan & Trust Co..	\$6,605.02	
Deposited with the Corn Exchange Bank.....	881.61	7,486.63

		\$150,700.92
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H. R. MITCHELL,
Asst. to Treasurer in Charge of Pensions.
 January 1, 1928.

CORNELIUS R. AGNEW,
Treasurer.

PEAT, MARWICK, MITCHELL & CO.

ACCOUNTANTS AND AUDITORS

40 EXCHANGE PLACE
NEW YORK, N. Y.

Certificate of Auditors

We have audited the books and accounts of the New York Zoological Society and of the "Pension Fund Income Account" for the year ended December 31, 1927, and certify that the foregoing schedules are in accordance with the books, and that, in our opinion, they correctly record the transactions relating to the funds of the Society and the Pension Fund Income Account for the year 1927, and the condition of the funds as at December 31, 1927.

The subscriptions, donations and dues reported as received, and the income from investments have been properly accounted for, and the securities and cash on hand at December 31, 1927, as shown in the accounts of the funds presented herewith, have been checked and found in order. Satisfactory vouchers have been produced for the expenditures.

New York, N. Y.,
March 28, 1928.

PEAT, MARWICK, MITCHELL & Co.

Report of the Auditing Committee

OF THE

NEW YORK ZOOLOGICAL SOCIETY

To the President and Board of Managers
of the New York Zoological Society:

Dear Sirs:

We beg to report that we have examined the annual audit of the books and accounts of the New York Zoological Society for the year ended December 31, 1927, made by Messrs. Peat, Marwick, Mitchell & Co., Chartered Accountants, and herewith submit the same to you as a complete and satisfactory audit of said books and accounts, including the General Funds, the Carnegie Pension Fund and the Pension Fund Income Account, it appearing that all expenditures and receipts of the various accounts are fully set forth therein; that the cash on hand and at the various depositories has been verified and found correct, and that all securities in which the funds of the Society are invested have been examined and found as reported.

Expenditures made through the Park Department of the City of New York have not been verified by this audit as such moneys have not passed through the hands of the Society, but are in due course checked and verified by the Comptroller of this city.

Respectfully submitted,

WILLIAM W. NILES, *Chairman.*
W. REDMOND CROSS.
GEORGE C. CLARK, JR.

April 1, 1928.

SUBSCRIPTIONS TO THE ENDOWMENT FUNDS OF THE
NEW YORK ZOOLOGICAL SOCIETY
GENERAL ENDOWMENT ACCOUNT

Mrs. Frederick F. Thompson	\$55,000.00
E. C. Converse	50,000.00
Edwin Gould	40,000.00
George F. Baker	25,000.00
T. Coleman du Pont	25,000.00
Maria DeWitt Jesup	25,000.00
Cleveland H. Dodge	25,000.00
Jacob H. Schiff	25,000.00
Samuel Thorne	25,000.00
Watson B. Dickerman	20,000.00
J. P. Morgan	20,000.00
Lispenard Stewart	12,500.00
Charles E. Rhinelanders	10,478.33
Frank W. Kitching	10,329.16
Edward S. Harkness	10,000.00
James J. Hill	10,000.00
Henry Iden	10,000.00
Ogden Mills	10,000.00
Levi P. Morton	10,000.00
Percy R. Pyne	10,000.00
John D. Rockefeller, Jr.	10,000.00
Edward Russ	10,000.00
Phoebe Anna Thorne	10,000.00
C. F. Dieterich	6,000.00
Mortimer L. Schiff	6,000.00
Abram G. Nesbitt	5,500.00
John D. Archbold	5,000.00
Samuel P. Avery	5,000.00
Frederick G. Bourne	5,000.00
Robert S. Brewster	5,000.00
John L. Cadwalader	5,000.00
Andrew Carnegie	5,000.00
Hugh J. Chisholm	5,000.00
George C. Clark	5,000.00
George J. Gould	5,000.00
Archer M. Huntington	5,000.00
George W. Perkins	5,000.00
Nelson Robinson	5,000.00
F. K. Sturgis	5,000.00
Henry A. C. Taylor	5,000.00
Emily Trevor	5,000.00
Serena Rhinelanders	2,500.00
John A. Roebling	2,500.00
Grant B. Schley	2,500.00
Mrs. Ethel B. Thayer	2,000.00
Emil Wolf	1,405.50
Mrs. Finley J. Shepard	1,325.00
Dr. Walter B. James	1,000.00
Emma C. Jones	1,000.00
<i>Carried forward</i>	<hr/> \$565,037.99

<i>Brought Forward</i>	\$565,037.99
Jacob Langeloth	1,000.00
F. Augustus Schermerhorn	1,000.00
Louis J. Boury	800.00
Oswald W. Uhl	800.00
C. N. Bliss	500.00
Dr. John F. Erdmann	500.00
Estate of Harry Mayer	500.00
Oliver J. Wells	500.00
John J. Pierpont	250.00
H. C. von Post	250.00
Through Ladies' Auxiliary	3,355.00
Life Memberships and Various Subscriptions	42,786.38
	<hr/>
	\$617,279.37
Loss on Sale of Securities	1,751.78
	<hr/>
	\$615,527.59

ROCKEFELLER ENDOWMENT ACCOUNT

John D. Rockefeller, Jr.	\$1,000,000.00
Profit on Sale of Bonds	233.53
	<hr/>
	\$1,000,233.53

SAGE ENDOWMENT ACCOUNT

Margaret Olivia Sage	\$741,318.87
Profit on Sale of Securities	37,089.17
Stock dividend	1,764.36
	<hr/>
	\$780,172.40
Transfer to Sage Construction Account	\$102,060.26
Transfers to Heads and Horns Building Account....	37,226.32
	<hr/>
	139,286.58
Balance, December 31, 1926	<hr/>
	\$640,885.82

GEORGE F. BAKER ENDOWMENT ACCOUNT

George F. Baker	\$100,000.00
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JACOB H. SCHIFF ENDOWMENT ACCOUNT

Jacob H. Schiff	\$25,000.00
Mortimer L. Schiff	25,000.00
	<hr/>
	\$50,000.00

Special Endowment Fund

Andrew Carnegie (Pension)	\$100,000.00
John L. Cadwalader (Animal)	20,000.00
Florence Lydig Sturgis (Bird)	10,000.00
Caroline Phelps Stokes (Bird)	5,000.00
December 31, 1927.	

CONTRIBUTIONS TO SPECIAL FUNDS OF THE NEW YORK ZOOLOGICAL SOCIETY

Includes all contributions of \$5,000 and over, and donations
to the original Park Improvement Fund of \$250,000.00

Harrison Williams	\$149,018.31
Andrew Carnegie	31,000.00
George F. Baker	23,500.00
Jacob H. Schiff	22,300.00
Mortimer L. Schiff	20,140.00
Samuel Thorne	18,950.00
George D. Pratt	17,000.00
Edward S. Harkness	15,500.00
George J. Gould	15,300.00
Anthony R. Kuser	15,200.00
Cleveland H. Dodge	15,125.00
John D. Rockefeller	15,000.00
E. C. Converse	14,000.00
Robert S. Brewster	12,500.00
Percy R. Pyne	12,450.00
Marshall Field	12,000.00
Lispensard Stewart	10,250.00
John D. Archbold	10,100.00
Vincent Astor	10,000.00
Mrs. Andrew Carnegie	10,000.00
Clarence Dillon	10,000.00
Mrs. Frederick F. Thompson	10,000.00
William Rockefeller	9,000.00
Charles F. Dieterich	8,800.00
Levi P. Morton	8,500.00
Charles T. Barney	7,500.00
F. Augustus Schermerhorn	7,500.00
Cornelius Vanderbilt	7,500.00
C. Ledyard Blair	6,750.00
A. Barton Hepburn	6,500.00
Mrs. Finley J. Shepard	6,400.00
John Cadwalader	6,200.00
Oliver H. Payne	6,000.00
Henry A. C. Taylor	6,000.00
William K. Vanderbilt	6,000.00
William C. Whitney	6,000.00
Nelson Robinson	5,900.00
John S. Barnes	5,750.00
Frederick G. Bourne	5,500.00
J. P. Morgan	5,500.00
Emerson McMillan	5,280.00
Oswald Ottendorfer	5,250.00
William D. Sloane	5,250.00
Edward J. Berwind	5,000.00
William E. Dodge	5,000.00
Robert Goelet	5,000.00
C. P. Huntington	5,000.00
Mrs. John B. Trevor	5,000.00
Mrs. Antoinette E. Wood	5,000.00

\$636,413.31

LIST OF ACCESSIONS BY THE
New York Zoological Society

AT THE ZOOLOGICAL PARK

1927

- ACKERMAN, CAPTAIN L., Brooklyn, N. Y.:
Brown Sapajou.
- ACREX HAULAGE CORPORATION, New York City:
Box Tortoises (25 specimens).
- ADAMS, ALBERT H., S. S. *Minnetonka*, New York City:
Continental Song Thrushes (3 specimens).
- ALBEE, E. F., New York City:
Black Buck.
- ALDRICH, RICHARD, New York City:
Raccoon.
- AMERICAN MUSEUM OF NATURAL HISTORY, New York City:
1 Ground Boa, 3 DeKay Snakes, 1 Water Snake, 17 Spotted Salamanders
Total, 22 specimens.
- AROSTEGUY, MRS. ALBERT P., New York City:
Undulated Grass Parrakeet.
- BANANA SALES CORPORATION, THE, New York City:
South American Boa Constrictor.
- BATTLE, JOHN TUCKER, New York City:
White-Throated Sapajou.
- BEARCE, ROBERT F., West Medford, Mass.:
Diamond-Back Rattlesnake.
- BELL, MISS VIVIAN, New York City:
White-Faced Sapajou.
- BENEDICT, DR. RALPH C., Lake George, N. Y.:
Snapping Turtle.
- BEVAN, W. A., De Ridder, La.:
Water Snakes (21 specimens).
- BIRNBAUM, MISS MARY, New York City:
Red-Crested Cardinal.
- BOLES, GEORGE, Sound Beach, Conn.:
Skunks (4 specimens).
- BRICKWEDER, JOHN, New York City:
Bonnated Macaque.
- BRIGGS, L. D., Tarrytown, N. Y.:
Alligators (3 specimens).
- BROWN, MISS CORNELIA L., Palisade Park, N. J.:
Barbary Turtle Doves (2 specimens).
- BURBANK, BILLY, Larchmont, N. Y.:
Satinette Pigeon.
- BURKE, MISS PEGGY, New York City:
Aztec Conures (2 specimens).
- CALKINS, E. C., New York City:
Murine Opossum.
- CANDALORO, ANTHONY, New York City:
Red Foxes (3 specimens).

- CECIL, DR. RUSSELL L., New York City:
White Mice (100 specimens).
- CHAMBER OF COMMERCE, Dunedin, Fla.:
Alligator.
- CHANLER, ASHLEY, New York City:
Red Spider Monkey.
- CHANNING, WALTER, Boston, Mass.:
Gray Timber Wolf.
- CLARK, DR. HERBERT C., New York City:
Fer-de-Lance.
- COE, M. S., New York City:
Shama Thrush.
- CONANT, ROGER, Adamston, N. J.:
8 Water Snakes, 1 Black Snake.
- CONDON, SEE F., New York City.:
Green Monkey.
- COOK THOMAS & SON, New York City:
Tasmanian Devil.
- CORBO, LOUIS, Mt. Vernon, N. Y.:
Opossum.
- CORNETT, MRS. M., Brooklyn, N. Y.:
White-Winged Parrakeets (2 specimens).
- CORZIER, CLARENCE L., New York City:
Chameleon.
- CRIMMINS, COLONEL M. L., Ft. Sam Houston, Texas:
2 Desert Gopher Tortoises, 2 Box Tortoises, 2 Mud Turtles. Total, 6 specimens.
- CROCKER LABORATORY, Columbia University, New York City:
750 White Rats, 550 White Mice.
- CROSBY, JAMES, New York City:
Brown Sapajou.
- DAVIS, MRS. ARTHUR, East Orange, N. J.:
White-Throated Sapajou.
- DECKERT, RICHARD F., Miami, Fla.:
14 Green Water Snakes, 2 Chicken Snakes, 9 Banded Water Snakes, 4 Southern Ribbon Snakes, 1 Southern Green Snake, 1 Hog-Nosed Snake, 2 Florida King Snakes. Total, 33 specimens.
- DERRICK, MISS ANNA, New York City:
1 Marmoset, 1 Hooded Sapajou.
- DO AMARAL, DR. AFRANIO, Glenolden, Pa.:
South American Tree Vipers (2 specimens).
- DOLBEAR, MISS KATHERINE E., New Rochelle, N. Y.:
Southern Hare.
- DUFFY, JAMES, 3rd Assistant Engineer, S. S. *Munsomo*, New York City:
White-Crowned Pigeons (2 specimens).
- DYOTT, COMMANDER GEORGE MILLER, New York City:
Saki Monkey.
- EBELING, MRS. W. H., Lake Openaka, N. J.:
Box Tortoise.
- EDWARDS, J. S., Los Angeles, Calif.:
2 *Gerrhonotus* Lizards, 1 Rock Snake.
- ERICKSON, CHARLES and MARTELL, CARL, New York City:
1 Copperhead Snake, 1 Water Snake.
- ERICKSON, CHARLES and RILEY, JOHN, New York City:
Copperhead Snake.

- FAGAN, CHARLES, Rahway, N. J.:
2 Gray-Headed Lovebirds, 1 Magellan Robin, 1 Seed Snipe, 1 Moustached Jay, 1 Cineous Tinamou, 1 Peruvian Saltator, 1 Black Siskin, 1 Red-Throated Ground Dove, 2 Picui Doves, 1 Inca Tern. Total, 12 specimens.
- FEIST, FRED, New Rochelle, N. Y.:
Opossum.
- FISHER, JOSEPH, Huntington, L. I., N. Y.:
Flying Squirrel.
- FORD, MRS. JOHN, Forest Hills, L. I., N. Y.:
Green-Cheeked Amazon.
- GARRETT, MISS LAURA B., Long Island City, N. Y.:
Opossum.
- GILLAM, ARTHUR L., Flushing, L. I., N. Y.:
15 Copperhead Snakes, 4 Milk Snakes, 4 Rattlesnakes, 5 Pilot Blacksnakes, 1 Water Snake, 1 Ribbon Snake, 1 Garter Snake, 1 Hog-Nosed Snake, 1 Banded Rattlesnake. Total, 33 specimens.
- GILLET, OSCAR C., Jersey City, N. J.:
Florida Gallinule.
- GLAESER, CHARLES, New York City:
Gray Fox.
- GLASER, M., New York City:
Alligator.
- GLIDDEN, MISS M. M., Brooklyn, N. Y.:
Red-Billed Hill-Tits (3 specimens).
- GODDARD, MISS GLORIA, New York City:
Weeper Sapajou Monkey.
- GOLDHORN, DR. L. B., Mt. Vernon, N. Y.:
2 Rattlesnakes, 1 Pilot Blacksnake, 1 Milk Snake, 2 Garter Snakes. Total, 6 specimens.
- GRAF, F. H., San Bernardino, Calif.:
1 Coral King Snake, 1 Bull Snake, 1 Striped Snake, 2 Racers, 2 Boyle's King Snakes, 1 Sharp-Nosed Snake, 3 Rattlesnakes, 2 Horned Toads. Total, 13 specimens.
- GREEN, FREDERICK WILLIAM EDWARD, New York City:
English Ring-Necked Pheasant.
- GREEN, GEORGE, New York City:
English Ring-Necked Pheasant.
- GREENHALGH, F. J., New York City:
Alligator.
- GREENHALL, ARTHUR, New York City:
Golden-Headed Conure.
- GREGORY, MRS. E., New York City:
Roseate Cockatoo.
- GROMBACH, LIEUT. JOHN V., New York City:
Red-and-Blue Macaw.
- GUMBS, MRS. E., New York City:
Green Monkey.
- GURREN, WESLEY, New York City:
Red Fox.
- HAHNE GUSTAVE, New York City:
14 Painted Turtles, 1 Spotted Turtle.
- HAMMOND, MRS. EDWARD W., Larchmont Manor, N. Y.:
Alligator.
- HART, CAPTAIN ROBERT W., Rutherford, N. J.:
Purple Gallinule.

- HELMERS, LEON, Armonk, N. Y.:
Red-Shouldered Hawk.
- HENDERSON, MRS. E., Mt. Vernon, N. Y.:
Ring-Necked Pheasant.
- HENEGHAN, LEO, New York City:
Copperhead Snake.
- HESEL, HENRY, JR., New York City:
English Ring-Necked Pheasant.
- HOLLY, WILLIS, St. Simon's Island, Ga.:
Alligators (6 specimens).
- HOSACK, FRANCIS A., New York City:
American Barn Owl.
- HOUSTON ZOOLOGICAL PARK, Houston, Texas:
Coral King Snake.
- HOWARD, WILLIAM A., New York City:
Raccoon.
- HUNTINGTON, ARCHER M., New York City:
Golden Eagle.
- HURD, MISS ALICE G., New York City:
2 African Waxbills, 1 Strawberry Finch.
- JOHNSON, ERNEST, New York City:
Flying Squirrels (3 specimens).
- JOHNSON, ROBERT, New York City:
Alligator.
- JOHNSTON, DR. M. E., Fernandino, Fla.:
Diamond-Back Rattlesnakes (2 specimens).
- KELLEY, MRS. DAVID J., New York City:
Colombian Goldfinch.
- KELLY, MRS. J. F., New York City:
1 European Goldfinch, 1 Linnet.
- KETTEL, H. H., Clifton, N. J.:
Alligator.
- KING, HARRY, New York City:
White-Faced Sapajou.
- KINNEY, MORRIS, Butler, N. J.:
1 Blue-and-Yellow Macaw, 1 Red-and-Blue Macaw.
- KIRKMAN, C. W., New York City:
White-Faced Sapajou.
- KISH, MRS. F., New York City:
Rhesus Monkey.
- KNAPP, CHARLES A., Scarsdale, N. Y.:
Green Parrotlets (3 specimens).
- KNOWLES, A. M., Newark, N. J.:
Banded Rattlesnake.
- KOPPE, WILLIAM, New York City:
Snapping Turtle.
- KRONACHER, D. N., New York City:
Snapping Turtle.
- KUSER, COLONEL ANTHONY R., Bernardsville, N. J.:
Cooper Hawk.
- LAPORTE, EDMUND H., New York City:
Brazilian Barn Owls (4 specimens).
- LA PORTA, FRANK, New York City:
White Rats (12 specimens).
- LE JEUNE, ERNEST, Stapleton, S. I., N. Y.:
Mona Monkey.

- LENSEN, N. F., Darien, Conn.:
Great Horned Owl.
- LEVY, CHARLES, New York City:
English Ring-Necked Pheasant.
- LOW, HARRY B., New York City:
Northern Palm Tanager.
- LUTTERMAN, MRS. H. T., Woodbridge, Conn.:
Alligators (2 specimens).
- LYNCH, JOHN, Irvington-on-Hudson, N. Y.:
Ring-Necked Pheasants (3 specimens).
- MCCHAIN, ELLSWORTH, Peekskill, N. Y.:
1 Red-Tailed Hawk, 1 Great Horned Owl.
- MCGARRY, WALTER, New York City:
Opossum.
- MCJANDLESS, ROBERT N., New York City:
Alligators (2 specimens).
- MANN, THOMAS D., Quechee, Vt.:
Bald Eagle.
- MARCH, DOUGLAS, D. H., Tela, Honduras, C. A.:
2 Green Whip Snakes, 2 Green-Headed Whip Snakes, 1 Fer-de-Lance, 1
Snake Killer, 1 Spotted Tree Snake, 2 Green-Headed Tree Snakes, 1
Brown Racer, 1 Water Snake. Total, 11 specimens.
- MARTELL, CARL, and ERICKSON, CHARLES, New York City:
1 Copperhead Snake, 1 Water Snake.
- MARTIN, DR. J. C., Conway, Ark.:
Green Parrotlet.
- MASLENIKOFF, A., New York City:
Java Macaque.
- MAYNARD, GEORGE H., Mt. Vernon, N. Y.:
Gray Squirrel.
- MEADE, GEORGE D., White Plains, N. Y.:
Red-and-Blue Macaw.
- MEARKLIN, MRS. PAULA, New York City:
2 Tovi Parrakeets, 1 Gray Sapajou.
- MERKEL, HERMANN W., Bronxville, N. Y.:
Mink.
- MEROWITZ, C. E., New York City:
Java Monkey.
- MILLER, MRS. CHARLES, Yonkers, N. Y.:
Greater Sulphur-Crested Cockatoo.
- MITCHELL, O. M., Mamaroneck, N. Y.:
Red Coati Mundi.
- MITTELSTADT, MR. and MRS. WILLIAM, New York City:
Alligators (2 specimens).
- MITTERLECHNER, MRS. EUGENIE, New York City:
Orange-Flanked Parrakeets (2 specimens).
- MOORE, MRS. C. L., New York City:
Troupial.
- MOORE, REV. FATHER, New York City:
Alligator.
- MORVAN, GEORGE, Huntington, L. I., N. Y.:
Flying Squirrel.
- NELSON, ARTHUR, New York City:
Woodchuck.

- NEW YORK AQUARIUM, New York City:
5 Desert Gopher Tortoises, 4 Snapping Turtles, 10 Terrapin. Total, 19 specimens.
- NISON, MRS. M. L., New York City:
Squirrel Monkey.
- OESER, DR. RICHARD, Berlin-Wilmersdorf, Germany:
Canary Island Lizards (3 specimens).
- OLIVE, EDGAR A., JR., Stapleton, S. I., N. Y.:
Raccoon.
- OLIVER, JESS, Great Neck, L. I., N. Y.:
White-Throated Sapajou.
- ONLEY, MRS. A. G., New York City:
Raccoons (2 specimens).
- PAINTER, KENYON V., Cleveland, Ohio:
1 Guiana Hawk-Necked Parrot, 3 Cockateels, 1 Lemon Dove. Total, 5 specimens.
- PALMER, ALBERT, New York City:
Skylark.
- PANKIN, MISS HERMA, Atlantic Highland, N. J.:
Alligator.
- PARASPOLO, ANGELO, New York City:
Saw-Whet Owl.
- PERRY, KENNETH, South Orange, N. J.:
Black Snake.
- PLUMB, JOHN, New York City:
Skunk.
- PONVERT, ANTONIO, Lake Mahopac, N. Y.:
Gray Spider Monkey.
- POSTENS, WILLIAM, New York City:
Chacma Baboon.
- RADER, J. W., Matawan, N. J.:
Barn Owl.
- REIMERS, H., New York City:
Tarantula.
- RICHARDSON, WILLIAM H., Jersey City, N. J.:
Copperhead Snake.
- RILEY, JOHN and ERICKSON, CHARLES, New York City:
Copperhead Snake.
- RIPPERE, R. ELLIOTT, New York City:
Raccoon.
- ROFFI, CESARE, New York City:
1 Chaffinch, 1 Hawfinch.
- ROSE, MISS NELLIE A., Pleasantville, N. Y.:
Alligator.
- ROSS, MRS. E., Brooklyn, N. Y.:
Green Monkey.
- RUCKEL, MRS. FRANCIS A., New York City:
Snowy Owl.
- RUSSELL, WILLIAM L., Pelham Manor, N. Y.:
1 Black Tanager, 1 Saffron Finch.
- SCHABENCK, GEORGE J., New York City:
Marmoset.
- SCHEMMER, WILLIAM J., New York City:
Alligator.
- SCHREBNICK, J., New York City:
Alligator.

- SCHULZE, PAUL, Jamaica, L. I., N. Y.:
Herring Gull.
- SCHUTE, JAVISH, North Stamford, Conn.:
Spotted Salamander.
- SELMAR, ROBERT A., New York City:
King Snake.
- SHOLLENBERGER, ROBERT, New York City:
Horned Toads (2 specimens).
- SKINNER, MISS HAZEL HOWE, New York City:
Ocelots (2 specimens).
- SLEIGHT, MISS ESTHER E., Mt. Vernon, N. Y.:
Alligator.
- SMITH, ALBERT, St. Albans, L. I., N. Y.:
White-Brown Green Monkey.
- STAFFORD, H. H., New York City:
White-Throated Sapajou.
- STAUBACH, W. M., New York City:
Alligator.
- STERN, J., New York City:
Skylark.
- STEWARTSON, ARTHUR, Huntington, L. I., N. Y.:
Flying Squirrel.
- STIMSON, A. C., Houston, Texas:
Mud Snake.
- SULLIVAN, J. G., Pelham, N. Y.:
Rhesus Monkey.
- TABENHOUSE, M., New York City:
2 Copperhead Snakes, 1 Banded Rattlesnake.
- TARR, LEON A., New York City:
Coyotes (2 specimens).
- TAYLOR, DR. GEORGE J., New York City:
Tovi Parrakeet.
- TAYLOR, J., Mariners Harbor, S. I., N. Y.:
Alligator.
- TEGGE, JOHN, Woodside, L. I., N. Y.:
Panama Amazon.
- THOMAS, B. F., New York City:
Raccoon.
- THOMAS, H., New York City:
Opossum.
- THOMPSON, GEORGE L., New York City:
Southern Rice Crackles.
- THOMPSON, S. H., 2nd Officer, S. S. *David McKelvey*, New York City:
Purple Gallinule.
- TOBIN, JAMES, New York City:
1 Iguana, 1 Tarantula.
- TOWNSEND, CAPTAIN EDWARD T., White Plains, N. Y.:
Ferrets (6 specimens).
- TRUMAN, STEWART W., Yonkers, N. Y.:
Opossum.
- VAUGHN, H. H., Montreal, Canada:
Javan Myna.
- WALKER, N. H., Black Mountain, N. C.:
Rattlesnake.
- WALTON, COATES, Philadelphia, Pa.:
1 Serian Finch, 1 Green Singing Finch.

- WEBSTER, MISS JUNE, New York City:
Sooty Mangabey.
- WEEKS, I. T., Brawley, Calif.:
Chuckawalla.
- WEISBERG, M., New York City:
Alligator.
- WHEELER, W., Morsemere, N. J.:
Banded Rattlesnake.
- WICKE, EDWIN, Mt. Vernon, N. Y.:
Alligator.
- WIEGMANN, DR. WILLIAM H., New York City:
Green Snake.
- WILDERBUSCH, H., Hoboken, N. J.:
Yellow Baboon.
- WILLSEY, MRS. MARIE, New York City:
Marmoset.
- WILLSON, J. T., New York City:
Great Horned Owl.
- WORTH, MRS. R. D., White Plains, N. Y.:
Marmoset.
- ZWICKERT, A., New York City:
Great Horned Owl.

Library

BY GIFT

- BRITISH MUSEUM (Natural History), London:
Monograph of the Sea Snakes, by Malcolm Smith.
- ROBERTS, MRS. CHARLES HENRY, New York City:
Pheasants: Their Lives and Homes, by William Beebe. 2 volumes.
- WALCOTT, FREDERIC C., New York City:
A Natural History of the Ducks, by John C. Phillips. Volumes II, III and IV.

National Collection of Heads and Horns

BY GIFT

- DALZIEL, MISS ALEXANDRIA, New York City:
Black Rhinoceros (*Diceros bicornis*). Mounted Head.
- SWAN, ROBERT, Hingham, Mass.:
American Elk (*Cervus canadensis*). Mounted Head.
- TAYLOR, IRVING K., New York City:
Bohor Reedbuck (*Cervicapra bohor*). Mounted Head.
- VALENTINE, DR. WILLIAM A., New York City:
American Moose (*Alces americanus*). Two pairs of Antlers.
Newfoundland Caribou (*Rangifer terraenovae*). Two Mounted Heads.
Maine Moose (*Alces americanus*). Mounted Head.
Woodland Caribou (*Rangifer tarandus caribou*). Mounted Head.
Rocky Mountain Elk (*Cervus canadensis*). Mounted Head.
Prong-Horned Antelope (*Antilocapra americana*). Mounted Head.
- WESTERVELT, L., New York City:
Maine Moose (*Alces americanus*). Mounted Head.
Caribou (*Rangifer tarandus*). Mounted Head.
Catalina Island Wild Goat. Mounted Head.
- WHITE, CAPTAIN HAROLD A., New York City:
Beisa Antelope (*Oryx beisa*). Head skin and horns.
Mountain Nyala (*Tragelaphus angasi*). Body skin and horns.

WHITEHOUSE, J. H. COLLECTION, through American Museum of Natural History,
New York City:

- Arabian Ibex (*Capra nubiana sinaitica*). Horns.
- Nilgiri Tahr (*Hemitragus hyloclrinis*). Mounted Head.
- Wild Indian Buffalo (*Bos bubalis*). Mounted Head.
- Four-Horned Sheep (*Ovis aries*). Mounted Head.
- Ibex. Mounted Head.
- Saiga (*Saiga tatarica*). Mounted Head.
- Babirusa (*Babirusa celebensis*). Skull and Tusks.
- Gerenuk (*Lithocranius walleri*). Mounted Head.
- Highland Sheep (*Ovis aries*). Mounted Head.
- Muntjac (*Cervulus muntjac*). Mounted Head.
- Muntjac (*Cervulus muntjac*). Antlers.
- Four-Horned Antelope (*Tetraceros quadricornis*). Mounted Head.
- Klipspringer (*Oreotragus saltator*). Mounted Head.
- Swayne's Dik-Dik (*Madoque swaynei*). Mounted Head.
- Takin (*Budorcas taxicolor*). Mounted Head.
- Marco Polo Sheep (*Ovis poli*). Mounted Head.
- Tibetan Argali (*Ovis ammon hodgsoni*). Mounted Head.
- Wart-Hog (*Phacochoerus africanus*). Mounted Head.
- Chital Deer (*Cervus axis*). Mounted Head.
- Asiatic Roebuck (*Capreolus pygargus*). Mounted Head.
- Eland (*Taurotragus oryx*). Horns.
- Cape Buffalo (*Bos caffer*). Horns.
- Babirusa (*Babirusa celebensis*). Mounted Head.
- Anoa (*Bos depressicornis*). Horns.
- Aoudad (*Ovis tragelaphus*). Mounted Head.
- Roebuck (*Capreolus capra*). Mounted Head.
- Selkirk Goat. Mounted Head.
- Wallachian Sheep (*Ovis aries*). Horns.
- Prong-Horned Antelope (*Antilocapra americana*). Mounted Head.
- Gray Wolf (*Canis occidentalis*). Mounted Head.
- Gray's Waterbuck (*Cobus maria*). Mounted Head.
- Cumming's Bushbuck (*Tragelaphus roualeyni Cumming*). Mounted Head.

Miscellaneous

MACKAY, CLARENCE H., New York City:
Scotch Grouse. 4 Mounted Specimens.

LIST OF ACCESSIONS BY THE
New York Zoological Society

AT THE AQUARIUM

1927

BY GIFT.

- AMANN, C., Corona, L. I., N. Y.:
Box Tortoise. (Shell dated 1878)
- BARTON, Mrs., Fort Hamilton, N. Y.:
Alligator.
- BENNETT, Mrs. WILLIAM, Newark, N. J.:
Green Turtle.
- BRONDLE, HENRY E., New York City:
Young Alligators. 4 specimens.
- BROOKS, LESTER, Brooklyn N. Y.:
2 Snapping Turtles.
- BRUCE GOLDFISH FISHERIES, Thornburg, Iowa.:
25 Shubunkins, 55 Comets.
- BURGESS, I. M., Plymouth, Mass.:
2 Snapping Turtles.
- CARAGOL, J. A., Orange, N. J.:
Young Alligator.
- CASTLE, Miss O., New York City:
Young Alligator.
- CELENTANO, LOUIS, Brooklyn, N. Y.:
Spider Crab, 2 Horseshoe Crabs.
- CHAPMAN, LLOYD M., New York City:
2 Alligators.
- COLP, EDWIN, Brooklyn, N. Y.:
Eel.
- CORTS, F. L., Richmond Hill, L. I.:
Snapping Turtle.
- CUMMINGS, Mrs. J. H., Wilmington, N. C.:
2 Lesueur Turtles, 1 Chicken Turtle, 4 Geographic Turtles, 2 Cumberland
Turtles and a collection of aquatic plants.
- DAMON, WILLIAM E., New York City:
Mounted Octopus.
- DARRIS, MICHAEL, New York City:
Petrel.
- DURBAR, Miss., New York City:
Young Alligator.
- EISINGER, ALFRED, Washington, D. C.:
Collection of Poeciliidae and tropical anura, 10 Shiners.
- ESKLUND, MARTIN, New York City:
Box Tortoise.
- FATHERS, CAUPCHIN, New York City:
17-year-old Alligator.
- FRIEDMAN, HARVARD, New York City:
2 Painted Turtles.

- GOLDBERG, MARWELL, Staten Island, N. Y.:
2 Goldfish, 4 Tadpoles, 6 Newts.
- GRIEBL, FRANK, New York City:
Diamond Back Turtle.
- GUARNSTRON, MRS. LOUISE, New York City:
Young Alligator.
- GUBARNIC, SAUL, Huntington Station, L. I., N. Y.:
Box Tortoise.
- HAHNE, GERTRUDE, New York City:
3 Painted Turtles.
- HAHNE, MRS. GUSTAVE, New York City:
Snapping Turtle, Cumberland Turtle.
- HAMERLE, JERRY, Union City, N. J.:
Cumberland Turtle.
- HAMILTON, PARKER, Bogota, N. J.:
13 Painted Turtles.
- HELBORSEN, HARRY, Richmond Hill, L. I., N. Y.:
Cuban Lizard.
- HENGERER, E. K., New York City:
Geographic Turtle.
- HIRSCH, MORRIS, New York City:
10 Diamond Back Terrapins.
- HOCH, MRS., New York City:
200 Small Fresh Water fish.
- HOLLIS, J. M., Roselle, N. J.:
Painted Turtle.
- HORLICK, H., Brighton Beach, N. Y.:
Spiny Boxfish.
- JACKSON, SETH, Far Rockaway, L. I., N. Y.:
Razor-billed Awk.
- KIVASNY, WILLIAM, New York City:
Box Tortoise.
- KANSAS FISH & GAME COMMISSION, Kansas:
22 Painted Turtles, 15 Mud Turtles, 8 Yellow-bellied Sliders, 1 Soft-shelled Turtle.
- LEADBETTER, MISS, New York City:
Turtle.
- LEE, MISS LILA, New York City:
Young Alligator.
- LIEMAN, GERHARD I., Union City, N. J.:
11 Common Newts.
- MATLAND, CAPTAIN JOHN, S. S. *Strudsholm*:
Loggerhead Turtle.
- MCLEOD, C. M., Brooklyn, N. Y.:
Snapping Turtle.
- MILEY, H. S., Brunson, S. C.:
2 Young Alligators.
- MOFFAT, PATRICK, Brooklyn, N. Y.:
Audubons Shearwater.
- MORAN, JOSEPH P., New York City:
2 Alligators.
- NORTH, RAYMOND, Brooklyn, N. Y.:
Young Alligator.
- PALMER, J. M., New York City:
2 Geographic Turtles, 1 Cumberland Turtle.

- PUBLIC SCHOOL 33, New York City:
Box Tortoise.
- PUBLIC SCHOOL 151, New York City:
Turtle and Young Alligator.
- RICCIO, JAMES, Stapleton, Staten Island:
Box Tortoise.
- SALESKA, MISS ADELIA, New York City:
Box Tortoise.
- SCHENKER, A., New York City:
Painted Turtle.
- SCHLAY, MRS., Garden City, L. I., N. Y.:
2 Young Alligators.
- SOUTH SIDE SPORTSMEN'S CLUB, Oakdale, L. I., N. Y.:
75 Brook Trout, 100 Grayling.
- STAIGHT, MRS. E. W., Castleton Park, Station Island:
Young Alligator.
- STATEN ISLAND MUSEUM, St. George, Staten Island:
1 Carp.
- TOTH, JOHN, New York City:
Box Tortoise.
- TURKEL, MRS. S. S., New York City:
Painted Turtle.
- WAGNER, MAJOR C. D., New York City:
1 Yellow-bellied Turtle, 1 Cumberland Turtle.
- WENTAR, RICHARD, New York City:
3 Diamond Back Terrapins.
- WESTERWELT, L., New York City:
Mounted Barracuda.
- YOUNG'S PIER CORP., Atlantic City, N. J.:
Collection of Marine Fishes.

SPECIMENS PURCHASED BY THE SOCIETY

Salt Water Local.—Fishes numbering 2,049, representing 47 species, invertebrates numbering 1630, representing 11 species, and a few turtles were collected by the well-boat *Seahorse*. Quantities of live foods were also secured. Specimens purchased from local fishermen are included.

Salt Water Tropical.—Beau Gregory, 200; Black Angelfish, 51; Black Grouper, 21; Blue Angelfish, 23; Blue Parrotfish, 1; Blue-striped Grunt, 28; Brown Moray, 1; Brown Tang, 7; Buffalo Trunkfish, 3; Butter Hamlet, 3; Chub, 22; Common Triggerfish, 38; Coney, 6; Cowfish, 25; Dog Snapper, 10; Filefish, 11; French Angelfish, 6; Gag, 3; Golden Grunt, 1; Grasyby, 5; Green Moray, 2; Gray Snapper, 28; Hogfish, 9; Houndfish, 1; Little-head Porgy, 21; Mud Parrotfish, 1; Muttonfish, 9; Nassau Grouper, 7; Ocean Triggerfish, 3; Parrotfish, 58; Pilotfish, 3; Pinfish, 6; Porkfish, 172; Pudding Wife, 1; Queen Angelfish, 2; Queen Triggerfish, 1; Red Hind, 4; Rock Hind, 1; Sailor's Choice, 14; Salema, 9; Sargent Major, 27; Scamp, 1; School Master, 45; Shark Sucker, 2; Sheepshead, 3; Slippery Dick, 4; Spiny Boxfish, 2; Spot Snapper, 31; Spotted Moray, 2; Squirrel-fish, 4; Tom Tate, 37; Townsend's Angelfish, 5; White Grunt, 46; Yellow Tail, 7; Hermit Crab, 2. Total, 1,038 specimens of 57 species.

Local Fresh Water Collections.—The following were collected by employees of the Aquarium in local park lakes. Pearl Roach, 844; Common Roach,

800; Goldfish, 513; Sunfish, 1,120; Calico Bass, 1; Silver Perch, 1; Yellow Perch, 690; White Perch, 880; Carp, 4; Large Mouthed Bass, 2; Crayfish, 196; Snails, 5,100. A collection of 53 small tropical fishes was purchased from a German shipper.

The Aquarium Library

BY GIFT.

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- MYERS, GEORGE S., Stanford University, Calif.:
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 No. 7. *The Life-History and Growth of the Piso Clam*, by Frank W. Weymouth.
 No. 8. *Racial and Seasonal Variation in Pacific Herring, California Sardine and California Anchovy*, by Carl L. Hubbs.
 No. 10. *Life History of Leuresthes tenuis, an Atherine Fish with Tide-Controlled Spawning Habits*, by Frances M. Clark.
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U. S. NATIONAL MUSEUM:

Annual Report, 1926.

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 *PORTER, CLARENCE,
 *POTTER, MRS. HENRY C.,
 POTTER, WILSON,
 PRATT, DALLAS B.,
 PRATT, HAROLD I.,
 PROCTER, A. PHIMISTER,
 PULITZER, RALPH,
 PUTNAM, GEORGE P.,
 *PYNE, M. TAYLOR,
 QUINLAN, FLORENCE E.,
 *QUINTARD, GEORGE W.,
 RAYMOND, CHARLES H.,
 RICE, ALEXANDER HAMILTON,
 RICE, MRS. ALEXANDER HAMILTON,
 *RICHARDSON, MRS. GEORGE H.,
 RIKER, JOHN J.,
 RIKER, SAMUEL, JR.,
 *ROBB, J. HAMPDEN,
 *ROBBINS, MILTON,
 ROBINSON, ARTHUR,
 RODEWALD, F. L.,
 ROGERS, ARCHIBALD,
 ROGERS, JAMES GAMBLE, JR.,
 RUCKER, WILLIAM J.,
 RUNGIUS, CARL,
 RUTHERFORD, WINTHROP,
 RYLE, WILLIAM,
 *ST. JOHN, FRANK L.,
 *SALTERS, J. SANFORD,
 SAMPSON, HENRY,
 SANBORN, ELWIN R.,
 *SANDS, WILLIAM R.,
 SANFORD, HENRY,
 SANFORD, HENRY, JR.,
 SANFORD, SAMUEL S.,
 *SANGER, FAIRFIELD OSBORN,
 *SARGENT, HENRY B.,
 SATTERLEE, H. L.,
 SATTERLEE, MRS. H. L.,
 SATTERLEE, MISS MABEL M.,
 SCARRITT, H. S.,
 *SCHERMERHORN, J. EGMONT,
 *SCHIEFFELIN, EUGENE,
 SCHIEFFELIN, SCHUYLER,
 SCHLEY, EVANDER B.,
 SCHLEY, K. B.,
 SCHWARZENBACH, ROBERT J. F.,
 SCOTT, STEVENSON,
 SCOVILLE, MISS GRACE,
 SEMKEN, DR. GEORGE H.,
 SETON, ERNEST THOMPSON,
 SHARPE, HENRY D.,
 SHEARSON, EDWARD,
 SHELTON, CHARLES,
 SHERMAN, GEORGE,
 *SHERMAN, WILLIAM WATTS,
 SHEWAN, JAMES,

*DECEASED

- *SHIELDS, GEORGE O.,
SLATER, H. N.,
SLOAN, BENSON B.,
*SLOAN, JOHN,
*SLOAN, SAMUEL,
SLOAN, SAMUEL,
SLOANE, MALCOLM D.,
SMITH, JAMES A.,
SOHER, LE ROY,
SPEYER, JAMES,
SQUIBB, DR. EDWARD H.,
SQUIER, STUART C.,
*STETSON, FRANCIS LYNDE,
STEWART, WILLIAM R., JR.,
STOKES, MISS OLIVIA E. PHELPS,
STREETER, D. D.,
*STURGES, FREDERICK,
STURGES, FREDERICK, JR.,
TABER, MISS MARY,
TARLTON, LESLIE JEFFERIS,
TAYLOR, FRANK J.,
*THALMAN, ERNST,
THOMPSON, MRS. J. TODD HUNTER,
THOMPSON, LEWIS S.,
*THOMPSON, WILLIAM P.,
THORNE, MRS. W. V. S.,
*TILFORD, FRANK,
TILFORD, MRS. HENRY MORGAN,
TOD, ROBERT E.,
TODD, WILLIAM H.,
TODD, WILLIAM R.,
TOWNSEND, DR. CHARLES H.,
TREVOR, HENRY G.,
TREVOR, JOHN B.,
TRITTON, CLAUDE H.,
TUCK, EDWARD,
TUPPER, DR. CHARLES C.,
UHLMANN, FREDERICK,
UPPERCU, INGLIS M.,
*VAIL, THEODORE N.,
*VANDERBILT, ALFRED G.,
VAN DER SMISSEN, DR. G. J.,
VAN NORDEN, MRS. GRACE TALCOTT,
VAN RENSSELAER, CHARLES A.,
VARNUM, MRS. JAMES M.,
*WADSWORTH, MAJOR W. AUSTIN,
WADSWORTH, MRS. W. A.,
WAID, D. EVERETT,
WAINWRIGHT, RICHARD T.,
*WALKER, DR. HENRY FREEMAN,
WANAMAKER, RODMAN,
WARBURG, FELIX M.,
*WARREN, SAMUEL D.,
*WATSON, FRANCIS A.,
WATSON, JAMES S.,
WEBB, WATSON,
WEBB, DR. W. SEWARD,
WEBSTER, HAMILTON FISIL,
*WELCHER, MRS. FANNY AVERY,
WELLS, MRS. OLIVER J.,
*WENDELL, EVERT JANSEN,
*WETMORE, CHARLES W.,
*WETMORE, GEORGE PEABODY,
WHARTON, WILLIAM P.,
WHEALTON, LOUIS N.,
WHITE, EDWARD,
WHITE, JOHN JAY,
*WHITEHEAD, PAUL,
WHITMAN, MALCOLM D.,
WHITNEY, CASPAR,
WHITNEY, CORNELIUS VANDERBILT,
WHITNEY, HARRY PAYNE,
*WHITNEY, PAYNE,
WILLETS, ELMORE A.,
WILLETS, HOWARD,
WILLIAMS, CLARK,
WILLIAMS, WILLIAM,
*WING, JOHN D.,
WING, JOHN MORGAN,
WINTHROP, BEEKMAN,
*WINTHROP, EGERTON L.,
*WITHERS, GEORGE B.,
WOERISHOFFER, MRS. ANNA,
WOOD, DR. CASEY A.,
WOODWARD, WILLIAM,
*WORTHINGTON, C. C.,

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*STEWART, LISPENARD,
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WILSON, PROF. EDMUND B.,

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ALKER, JAMES WARD,	BACON, MRS. FRANCIS McNIEL,
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ANDERSON, MRS. WILLIAM,	BAKER, JOHN STEWART,
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ANDREWS, GEN. AVERY D.,	BAKER, STEPHEN,
ANDREWS, GWYNNE M.,	BALDWIN, HENRY DEFOREST,
*ANDREWS, DR. W. EDSON,	BALDWIN, JAMES H.,
ANDREWS, MRS. W. EDSON,	BALDWIN, JARED G.,
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ARCHBOLD, MRS. J. F.,	BANGS, HENRY McCOMB,
AREND, F. J.,	BANKS, THEODORE H.,
ARGABRITE, N. M.,	BANNARD, OTTO T.,
ARKUSH, REUBEN,	BARBER, THOMAS H.,
ARMOUR, GEORGE A.,	BARBOUR, F. K.,
ARMOUR, MRS. HERMAN O.,	BARCLAY, MRS. REGINALD,
ARMSTRONG, F. F.,	BARDACH, JOSEPH,
ARNOLD, BENJAMIN WALWORTH,	BARKER, DR. PERCEVAL M.,
ARNOLD, MISS MARY SELENA,	BARNARD, J. AUGUSTUS,
ARNOLD, PAUL,	BARNES, COURTLANDT D.,

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- BARNES, COURTLANDT D., JR.,
 BARNES, HENRY B.,
 BARNES, H. H.,
 BARNES, JAMES,
 BARNETT, CHESTER P.,
 BARNEY, ASHBELL H.,
 BARNEY, EDGAR S., SC.D.,
 BARNEY, MRS. J. STEWART,
 *BARNUM, WILLIAM M.,
 BARR, MARK,
 BARRET, CECIL,
 BARRON, GEORGE D.,
 BARSTOW, MRS. F. Q.,
 BARTELS, HENRY,
 BARTLETT, PHILIP G.,
 BARTOL, HENRY G.,
 BARTON, MRS. CARLOTTA M.,
 BARTON, EDWARD RITTENHOUSE,
 BARTON, GEORGE DE FOREST,
 BARTON, RALPH,
 BASS, DR. MURRAY H.,
 BATES, FRANK C.,
 BATESON, RICHARD H.,
 BAUCHLE, THOMAS H., JR.,
 BAVA, FELICE,
 BAXTER, MRS. DON A.,
 BAYLIES, EDMUND L.,
 BAYNE, MRS. L. P.,
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 BEACH, WILLIAM N.,
 BEADLESTON, MISS EDITH,
 BEAL, MRS. ROBERT C.,
 BEALE, PHELAN,
 BEALL, C. W.,
 BEALL, JEREMIAH,
 BEDELL, GILSON,
 BEDLE, MISS JOSEPHINE D.,
 BEEKMAN, CHARLES K.,
 BEEKMAN, FENWICK, M.D.,
 BEERS, MRS. E. LEGRAND,
 BEHREND, DR. OTTO F.,
 BELKNAP, HENRY W.,
 BELL, WALTER E.,
 BELL, WILLIAM B.,
 BELLER, A.,
 BELLER, WILLIAM F.,
 BENDA, W. T.,
 BENEDICT, LEMUEL C.,
 BENJAMIN, WILLIAM M.,
 BENKARD, HARRY H.,
 BENKARD, MRS. HARRY H.,
 BENKARD, J. PHILIP,
 BENSON, R. LAWRENCE,
 BENZIGER, BRUNO,
 BERDAN, TEMPLE T.,
 BERG, HUNTER VAN B.,
 BERGER, MRS. ALMA,
 BERGER, MRS. CHARLES F.,
 BERGGREN, E. R. T.,
 BERGH, HENRY,
 BERKITZ, BERNHARD,
 BERNHEIM, GEORGE B.,
 BERNHEIM, HENRY J.,
 BERNHEIMER, CHARLES L.,
 BERTRON, S. R.,
 BEST, MRS. CHARLES B.,
 BETTY, MISS ELLEN I.,
 BIDDLE, MISS EDITH FRANCIS,
 BIDDLE, WILLIAM C.,
 BIER, MRS. SYLVAN,
 *BIGELOW, DR. WILLIAM S.,
 BIGGS, MRS. HERMANN M.,
 BIKOFF, ZAFFAR X.,
 BILL, EDWARD LYMAN,
 BILL, RAYMOND,
 BILLINGS, C. K. G.,
 BING, ALEXANDER M.,
 BINNEY, EDWIN,
 BIRCHALL, MRS. F. T.,
 BIRCHALL, MISS KATHERINE H.,
 BISLAND, P. E.,
 BISSINGER, GEORGE H.,
 BISTANY, GEORGE M.,
 BIXBY, HENRY D.,
 BLACK, MRS. ROBERT C.,
 BLAGDEN, GEORGE,
 BLAGDEN, MRS. JULIA G.,
 BLAGDEN, MEREDITH,
 BLAIR, DR. BRUCE,
 BLAIR, CHARLES H.,
 BLAIR, J. INSLEY,
 BLAIR, MRS. LEDYARD,
 BLAKE, JOSEPH A.,
 BLAKE, MRS. JOSEPH,
 BLAKESLEE, MRS. THERON J.,
 BLISS, MISS S. D.,
 BLISS, MRS. WALTER PHELPS,
 BLOCK, RALPH,
 BLODGETT, THOMAS H.,
 BLOODGOOD, ROBERT F.,
 BLOOMINGDALE, MRS. JOSEPH B.,
 BLUM, DR. RICHARD,
 BLUMENTHAL, HUGO,
 BLUMENTHAL, SIDNEY,
 BOARDMAN, MRS. BRADFORD,
 BOARDMAN, KENNETH,
 BOARDMAN, MISS R. C.,
 BODKIN, MISS MURIEL C.,
 BOESE, QUINCY WARD,
 BOETTGER, MISS PAULINE,

*DECEASED

- BOETTGER, THEODORE,
 BOLSTER, HAROLD,
 BOLTON, MISS ELLA F.,
 BOLTON, MISS EMILY L.,
 BOLTON, WILLIAM H.,
 BOND, STEPHEN N.,
 BORIE, A. E.,
 BORLAND, J. NELSON,
 BOWDOIN, MISS EDITH G.,
 BOWDOIN, GEORGE TEMPLE,
 BOWEN, CLARENCE WINTHROP,
 BOWEN, MRS. CLARENCE WINTHROP,
 BOWERS, HENRY S.,
 BOWERS. SPOTSWOOD DANDRIDGE,
 *BOWNE, FRANCIS DRAPER,
 BOYD, ROBERT E.,
 BOYDEN, DWIGHT F.,
 BRACE, MRS. ROBERT N.,
 BRADLEY, ALLAN B. A.,
 BRADLEY, MISS MARY T.,
 BRADY, NICHOLAS F.,
 BRAND, ALBERT R.,
 *BREED, R. E.,
 BREWSTER, GEORGE S.,
 BREWSTER, MRS. ROBERT S.,
 BRIDGES, ROBERT,
 BRIGGS, JAMES E.,
 BRILL, DR. A. A.,
 BRINCKERHOFF, ALEXANDER G.,
 BRINTON, MRS. WILLARD C.,
 BRISTOL, JOHN I. D.,
 BRISTOW, WILLIAM B.,
 BROKAW, CLIFFORD V.,
 BROKAW, MRS. CLIFFORD V.,
 BRONSON, WILFRID SWANCOURT,
 BROOKS, MISS BERTHA G.,
 BROOKS, CHESTER K.,
 BROOKS, FREDERICK,
 BROWN, MRS. ARCHER,
 BROWN, CHARLES HILTON,
 BROWN, CHARLES S., JR.,
 BROWN, DICKSON Q.,
 BROWN, EDWIN H.,
 BROWN, F. RHINELANDER,
 BROWN, COL. FRANKLIN Q.,
 BROWN, MRS. FRANKLIN Q.,
 BROWN, VERNON CARLETON,
 BROWNING, MRS. J. HULL,
 BROWNING, WILLIAM H.,
 BRUNDIGE, MISS ELIZABETH B.,
 BRUNSWICK, MRS. EMANUEL,
 BRYAN, BENJAMIN B.,
 BRYCE, MISS MARY T.,
 BUCKLE, LEWIS M.,
 BUCKLEY, B. LORD,
 BUCKNER, THOMAS A.,
 BUDD, HENRY A.,
 BUECHNER, C. FRED,
 BUGBEE, DR. HENRY G.,
 BUHRMAN, T. SCOTT,
 BULKLEY, EDWIN M.,
 BULKLEY, MRS. EDWIN M.,
 BULKLEY, JONATHAN,
 BULKLEY, MRS. JONATHAN,
 BULKLEY, L. DUNCAN,
 BULLOCK, GEORGE,
 BUMSTED, CLARENCE VAN R., M.D.,
 BURBANK, DR. REGINALD,
 BURDEN, JAMES A.,
 BURDEN, MRS. W. A. M.,
 BURGESS, E. PHILLIPS,
 BURGESS, THORNTON W.,
 BURHORN, EDWIN,
 BURKE, JOHN,
 BURLEIGH, MRS. GEORGE W.,
 BURLINGHAM, CHARLES C.,
 BURNHAM, GORDON W.,
 BURR, GEORGE L.,
 BURRELL, WILLIAM S.,
 BURRILL, EDWARD L.,
 *BUSH, D. FAIRFAX,
 BUSH, MRS. E. W. L.,
 BUSH, I. JAMES,
 BUTLER, ARTHUR W.,
 BUTLER, CHARLES STEWART,
 BUTLER, FRANCIS X.,
 BUTLER, LOUIS F.,
 BYRNE, MRS. JAMES,
 CABOT, F. H.,
 CABOT, JOHN, JR.,
 CAESAR, CHARLES U.,
 CAESAR, HENRY A.,
 CAHEN, JAMES P.,
 CALKINS, MISS EMMA W.,
 CALMAN, HENRY L.,
 CAMDEN, MRS. SPRIGG D.,
 CAMMANN, EDWARD C.,
 CAMMANN, MRS. GEORGE P.,
 CAMMANN, HENRY LORILLARD,
 CAMPBELL, DONALD,
 CANFIELD, GEORGE FOLGER,
 CANNON, MISS MARY ANTONINETTE,
 CAPLIN, HARRY,
 CARLEBACH, MRS. EMIL,
 CARLEBACH, WALTER M.,
 CARLISLE, JAY,
 CARLTON, NEWCOMB,
 CARNS, ARTHUR L.,
 CARPENDER, WILLIAM,
 CARPENTER, C. L.,

*DECEASED

CARROLL, PHILIP A.,
 CARSON, MRS. J. HENRY,
 CARTER, ERNEST T.,
 CARTER, DR. HERBERT S.,
 CARTIER, P. C.,
 CASAMAJOR, DR. LOUIS,
 CASE, HENRY PHELPS,
 CASE, J. HERBERT,
 CASS, CHARLES ANDERSON,
 CASTKA, FRANK E.,
 CATTS, ROBERT M.,
 CATTY, F. GORDON,
 CAUTY, FRANK H.,
 CHADBOURNE, WILLIAM M.,
 CHADWICK, MRS. E. GERRY,
 CHALLINOR, DAVID,
 CHALMERS, ARTHUR A.,
 CHAMBERLAIN, GEORGE AGNEW,
 CHAMBERLIN, WILLIAM B.,
 CHAMBERS, FRANK R.,
 CHAMBERS, HILARY R.,
 CHANCE, EDWIN M.,
 CHANDLER, NORMAN WILMER,
 CHANLER, ROBERT W.,
 CHANLER, WILLIAM E.,
 CHAPIN, MRS. ALFRED,
 CHAPIN, MISS MARIA BOWEN,
 CHAPIN, MRS. NANO E.,
 CHAPMAN, CLARENCE C.,
 CHAPMAN, CLARENCE E.,
 CHAPMAN, HENRY OTIS,
 CHAPMAN, JOHN JAY,
 CHARLES, HOWARD W.,
 CHAVES, JOSE EDWARD,
 CHENEY, GEORGE L.,
 CHENEY, MRS. KNIGHT DEXTER, JR.,
 CHENEY, LOUIS R.,
 CHENEY, MISS MARY,
 CHILD, JOHN H.,
 CHILD, MRS. LEWIS P.,
 CHILDS, EVERSLEY,
 CHILDS, STARLING W.,
 CHISHOLM, MRS. HUGH J., SR.,
 CHOATE, MRS. ARTHUR O.,
 CHOATE, EDWARD A.,
 CHOATE, JOSEPH K.,
 CHUBB, PERCY,
 CHURCH, AUSTIN,
 CHURCH, CHARLES T.,
 CHURCH, E. D.,
 CHURCH, GEORGE H.,
 CHURCH, LOUIS P.,
 CLAFLIN, JOHN,
 *CLANCY, JOHN EVARTS,
 CLARK, B. PRESTON,

CLARK, C. M.,
 CLARK, CHARLES MARTIN,
 CLARK, EDWARD H.,
 CLARK, MRS. EDWARD HARDY,
 CLARK, MISS E. MABEL,
 CLARK, MRS. EDGAR MILTON,
 CLARK, HAROLD BENJAMIN,
 CLARK, HERBERT L.,
 CLARK, J. FRANCIS ALOYSIUS,
 CLARK, MRS. J. F. A.,
 CLARK, JAMES L.,
 CLARK, MRS. JOHN C.,
 CLARK, J. WILLIAM,
 CLARK, JOHN W.,
 CLARK, MARSHALL,
 CLARKE, E. A. S.,
 CLARKE, LEWIS L.,
 CLARKE, THOMAS B.,
 CLARKSON, MISS ANNIE,
 CLAUSEN, GEORGE,
 CLEMENS, DR. JAMES B.,
 CLIFFORD, MILTON H.,
 CLOSE, WALTER H.,
 CLOWES, F. J.,
 CLOWES, FREDERICK V.,
 COAKLEY, C. G., M.D.,
 COBB, A. POLHEMUS,
 COCHRAN, G. D.,
 COCKCROFT, MISS E. V.,
 CODDINGTON, JOHN INSLEY,
 COFFIN, EDMUND,
 COFFIN, FRANCIS A.,
 COFFIN, REV. HENRY SLOANE, D.D.,
 COFFIN, WILLIAM SLOANE,
 COHEN, EMANUEL,
 COHN, SYLVAN,
 COLBURN, ALBERT E.,
 COLE, EDWARD F.,
 COLE, MRS. RUFUS,
 COLEBROOK, CHARLES B.,
 COLEMAN, C. P.,
 COLEMAN, MRS. LEIGHTON H.,
 COLGATE, GILBERT,
 COLGATE, HENRY A.,
 COLKET, J. HAMILTON,
 COLLIER, MRS. R. J.,
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 COLT, HARRIS D.,
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 COLT, S. SLOAN,
 COLTON, MRS. CHESTER LEE,
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 CONBOY, MARTIN,
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 CONHEIM, HERMANN,

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CONNFELT, CHARLES M.,
 CONOVER, H. B.,
 CONSTANTIAN, DR. RAPHAEL S.,
 CONTENT, HARRY,
 CONVERSE, MISS MARY E.,
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 COOGAN, MISS RHODA GORDON,
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 CORIELL, WILLIAM WALLACE,
 CORLIES, HOWARD,
 CORNELL, MISS EMILY LEFFERTS,
 CORNETT, MRS. GARDNER,
 CORWIN, ARTHUR F.,
 COSTER, CHARLES HENRY,
 COX, IRVING,
 COX & STEVENS,
 COYKENDALL, FREDERICK,
 CRABBE, MISS LOUISE G.,
 CRAIG, BURDETTE P.,
 CRAIG, MISS ISABELLE MACKENZIE,
 CRAIG, ROSS M.,
 CRANE, MRS. W. MURRAY,
 CRAVATH, MRS. PAUL D.,
 CRAWFORD, MARY M., M.D.,
 CRAWFORD, WILLIAM,
 CREWS, MISS MARY A.,
 CRIMMINS, MISS MARY C.,
 CRIMMINS, THOMAS,
 CROCKER, GEORGE A., JR.,
 CROCKER, WILLIAM T.,
 CROMWELL, JAMES W.,
 CROMWELL, LINCOLN,
 CROSBY, MAUNSELL S.,
 CROSS, GEORGE D.,
 CROSS, J. W.,
 CROSS, MISS MARY R.,
 CROSSLEY, G. REGINALD,
 CUDDIHY, ARTHUR B.,
 CULLMAN, HOWARD S.,
 CULLMAN, JOSEPH,
 CUNNINGHAM, FRANCIS DE L.,
 CUNNINGHAM, W. DE LANCEY,
 CURIE, CHARLES,
 CURIEL, H.,
 CURTIS, CHARLES P.,
 CURTIS, F. K.,
 *CURTIS, MRS. H. HOLBROOK,
 CURTIS, MRS. JENNETTE C.,

CUSHMAN, B. A.,
 CUSHMAN, PAUL,
 CUTLER, JOHN W.,
 *CUTTER, RALPH L.,
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 *CUTTING, HEYWARD,
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 DAMROSCH, FRANK,
 DANA, PAUL,
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 DAVENPORT, WILLIAM B.,
 DAVIDGE, WILLIAM H.,
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 DAVIS, MORGAN,
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 DAVIS, WATERS S.,
 DAVISON, MISS ALICE M.,
 DAVISON, MISS ELLA H.,
 DAVISON, F. TRUEEE,
 DAVISON, MRS. HENRY POMEROY,
 DAY, MISS LAURA V.,
 DAYTON, CHARLES W.,
 DEACON, DR. J. D.,
 DEANE, HARRY TENISON,
 DE CLAIRMONT, DR. ADOLPH,
 DE FOREST, JOHNSTON,
 DE FOREST, ROBERT W.,
 DE GOICOURIA, A. V.,
 DE HEREDIA, MRS. CARLOS M.,
 DE KAY, MRS. SIDNEY,
 DELAFIELD, EDWARD C.,
 DELAFIELD, LEWIS L.,
 DELANO, LYMAN,
 DELANO, MOREAU,
 DE LANOY, WILLIAM C.,
 DELONG, FRANK E.,
 DE LONG, MRS. GEORGE B.,
 DEMING, L. C.,
 DENBY, EDWIN H.,
 DEPEREGNY, COMTESSE,
 DEPEW, CHAUNCEY M.,
 DERBY, JAMES LLOYD,

*DECEASED

DERHAM, MRS. CHARLES, JR.,
 DERHAM, MRS. H. CASIMIR,
 DE SALA, RALPH C.,
 DETMER, JULIAN F.,
 DE VEAU, MRS. F. C.,
 *DEVINNE, T. B.,
 DEVOTION, MISS HARRIET N.,
 DEWEY, FREDERICK A.,
 DEWEY, MARTIN,
 DEXTER, GEORGE M.,
 DEYO, MISS MARGARET,
 DEZALDO, FREDERICK,
 *DICK, MRS. FAIRMAN ROGERS,
 DICKERSON, E. N.,
 DICKEY, MRS. CHARLES D.,
 DICKINSON, MRS. JOHN M.,
 DIEHL, GEORGE H., JR.,
 DIENST, A. P.,
 DIKE, OSCAR D.,
 DILLON, HERBERT LOWELL,
 DILWORTH, JOSEPH R.,
 DINSMORE, WILLIAM B.,
 DIX, MRS. ALFRED P.,
 DIXON, F. E.,
 DIXON, THEODORE P.,
 DOANE, BENJAMIN H.,
 DODD, ALFRED W.,
 DODGE, MRS. ARTHUR M.,
 DODGE, BAYARD,
 DODGE, CLEVELAND E.,
 DODGE, MRS. CLEVELAND H.,
 DOHME, JOHN L.,
 DOMINICK, BAYARD,
 DOMINICK, GAYER G.,
 DOMINICK, H. BLANCHARD,
 DOMMERICH, OTTO L.,
 DONALD, MISS ANNA E.,
 DOOLITTLE, F. W.,
 DOOLY, MRS. MARY,
 DOREMUS, F. S.,
 DOUBLEDAY, F. N.,
 DOUGHERTY, RT. REV. MGR. GEORGE
 A., D.D.,
 DOUGLAS, MISS ELIZABETH,
 DOUGLAS, WALTER,
 DOUGLAS, WILLIAM H.,
 DOWD, MRS. JOSEPH,
 DOWD, WYLLYS E., JR.,
 DOWLING, EDWARD D.,
 DOWNER, J. HALSEY,
 DOWNER, WILLIAM J.,
 DOWNEY, JOHN I.,
 DOWS, MRS. DAVID, SR.,
 DOWS, TRACY,

DRAGER, F. W.,
 DRAKE, MISS MARY E.,
 DRAPER, CHARLES D.,
 DRAPER, DR. GEORGE,
 DRAPER, JOHN M.,
 DRAYTON, J. COLEMAN,
 DRAYTON, MRS. HENRY COLEMAN,
 DRAYTON, W. HEYWARD, 3RD.,
 DREW, CORNELIUS,
 DRUMMOND, I. WYMAN,
 DUANE, ARTHUR,
 DUANE, MRS. JAMES MAY,
 DUBOIS, ARTHUR,
 DUBOIS, EUGENE,
 DU BOIS, MRS. MATTHEW B.,
 DUEL, DR. ARTHUR B.,
 DUFFY, JOHN J.,
 DUIS, B. A.,
 DUNCAN, STUART,
 DUNCAN, MRS. STUART,
 DUNHAM, LEWIS L.,
 DUNLOP, E. A.,
 DUNNE, MRS. FINLEY PETER,
 DU PONT, H. F.,
 DURANT, DONALD,
 DURFEE, CHARLES H.,
 DURKEE, MRS. A. W.,
 *DURKEE, EUGENE W.,
 DURKEE, RICHARD P. H.,
 DURKEE, MRS. RICHARD P. H.,
 DURYEA, MRS. H. B.,
 DUTCHER, JOHN GEROW,
 DWIGHT, MISS ADELIA A.,
 DWIGHT, JONATHAN, M. D.,
 DWIGHT, MRS. WINTHROP E.,
 EATON, MRS. FREDERICK H.,
 EATON, GEORGE L.,
 EBERSTADT, FERDINAND,
 ECK, WILLIAM J.,
 ECKART, EDMUND,
 EDDY, L. A., JR.,
 EDEN, JOHN H.,
 EDGAR, HERMAN L. R.,
 EDGAR, WILLIAM S.,
 EDGE, JOHN W. E.,
 EDISON, MRS. THOMAS A.,
 EDMONDS, THOMAS C.,
 EDWARDS, GEORGE HARTWELL,
 EDWARDS, DR. GEORGE VAIL,
 EHRET, LOUIS J.,
 EHRLMAN, MRS. ERNEST,
 EIDLITZ, ROBERT JAMES,
 EILERS, KARL,
 EINHORN, DR. MAX,
 EINSTEIN, I. D.,

*DECEASED

- EISING, HARRY,
 ELDRIDGE, LEWIS A.,
 ELDRIDGE, WILLIAM T.,
 ELIAS, HENRY H.,
 ELLIOTT, HOWARD,
 ELLNER, LEWIS A.,
 ELLSWORTH, D. S.,
 ELLSWORTH, JOHN S.,
 ELMENDORF, DR. TEN EYCK,
 ELSBERG, DR. CHARLES A.,
 EMANUEL, J. H., JR.,
 EMBURY, MISS EMMA C.,
 EMMET, MISS LYDIA F.,
 EMMET, ROBERT TEMPLE,
 ERDMANN, MARTIN,
 ERDMANN, WILLIAM,
 ERLANGER, MILTON S.,
 ESBERG, HENRY,
 ETTLINGER, LOUIS,
 EUSTIS, JOHN E.,
 EVANS, MRS. MORGAN D.,
 EVANS, S. M.,
 EVANS, VICTOR J.,
 EVARTS, MISS MARY,
 *EVELAND, FRANK,
 EWING, GEORGE R. M.,
 EWING, MRS. THOMAS,
 FABBRI, ERNESTO G.,
 FABBRI, MRS. SHEPARD,
 FABER, EBERHARD,
 FAHNESTOCK, DR. ERNEST,
 FAHNESTOCK, MRS. ERNEST,
 FAHNESTOCK, HARRIS,
 FAHNESTOCK, WILLIAM,
 FAIRCHILD, BENJAMIN L.,
 FAIRCHILD, BENJAMIN THOMAS,
 FAIRCHILD, MRS. CHARLES S.,
 FAIRCHILD, SAMUEL W.,
 FALES, HALIBURTON, JR.,
 FALLS, MRS. DEWITT CLINTON,
 FARLEY, COLVIN,
 FARLEY, MRS. GUSTAVUS, JR.,
 FARNAM, WILLIAM W.,
 FARR, JOHN, JR.,
 FARRAND, MAX,
 FAY, FRANCIS B.,
 FECHTIG, DR. ST. GEORGE,
 FEDER, JOSEPH T.,
 FELDMAN, HERMAN,
 FERGUSON, WILLIAM C.,
 FERRY, MANSFIELD,
 FEUSS, MAJOR ANDREW W.,
 *FEUSTMAN, LEON P.,
 FIDDLER, E. T.,
 FIELD, MRS. AUGUSTUS B.,
 FIELD, HENRY, F. R. A. I.,
 FIELD, H. F.,
 FIELD, MRS. MARSHALL,
 FILLEY, F. HERBERT,
 FINCKE, MRS. REGINALD,
 FISCHER, WILLIAM H.,
 FISH, MRS. HAMILTON,
 FISHER, EDWIN A.,
 FISHER, DR. G. CLYDE,
 FITZGERALD, CHARLES MAURICE,
 FITZHUGH, JOHN L.,
 FITZPATRICK, FRANK J. E.,
 FITZSIMMONS, PAUL,
 FLAGLER, HARRY HARKNESS,
 FLEISCHMANN, UDO M.,
 FLEITMAN, HENRY T.,
 FLEITMANN, FREDERICK T.,
 FLEMING, MATTHEW C.,
 FLETCHER, HENRY,
 FLORSHEIM, HARRY A.,
 FLOYD-JONES, EDWARD H.,
 FOGARTY, JAMES F.,
 FOOT, SANDFORD DWIGHT,
 FORBES, DR. JOSEPH H.,
 FORBIN, VICTOR,
 FORREST, ARCHIBALD A.,
 FORSYTH, MRS. HARRY,
 FOSBURGH, JAMES B. A.,
 FOSHAY, P. MAXWELL,
 FOSTER, F. TAYLOR,
 FOSTER, FRANK B.,
 FOSTER, GIRAUD,
 FOSTER, HOWARD CROSBY,
 FOSTER, J. HEGEMAN,
 FOSTER, MACOMB G.,
 FOWLER, MRS. ANDERSON,
 FOWLER, MRS. ARTHUR,
 FOWLER, HAROLD,
 FOWLER, RUSSELL S., M.D., F.A.C.S.,
 FOX, MISS ALICE BLEECKER,
 FOX, AUSTIN G.,
 FOX, FREDERICK P.,
 FRANK, LOUIS,
 FRASER, ALEXANDER J.,
 FRASER, ALEXANDER V.,
 FRASER, MRS. CHARLES D.,
 FRASER, MRS. GEORGE C.,
 FRASER, MISS J. K.,
 FRASER, MISS SARAH,
 FREDERICK, MRS. LEOPOLD,
 FREEDMAN, LEO,
 FREEMAN, MISS GERTRUDE A.,
 FRENCH, DANIEL C.,
 FRENCH, MRS. JOHN,
 FREW, WALTER E.,

*DECEASED

FRIEDMAN, MRS. A. S.,
 FRIES, DR. HAROLD H.,
 FRISSELL, A. S.,
 FRITH, MISS LOUISE S.,
 FROMM, S. W.,
 FROST, AARON V.,
 FROTHINGHAM, C. FREDERICK,
 FROTHINGHAM, JOHN W.,
 FROTHINGHAM, WILLIAM I.,
 FRY, MORTON H.,
 FULD, FELIX,
 FULLE, JOHN H.,
 FULLER, MRS. EUGENE,
 FULTON, HARRIET E.,
 FULTON, KERWIN H.,
 FUNKE, EDMUND A.,
 GAILLARD, MRS. WILLIAM D.,
 GALBAN, EUGENIO,
 GALLAND, MISS BERTHA,
 GALLAND, NATHANIEL K.,
 GALLATIN, ALBERT,
 GALLATIN, MRS. ALBERT,
 GALLATIN, GOELET,
 GALLATIN, MRS. GOELET,
 GALLAWAY, MERRILL W.,
 GALLOWHUR, W. G.,
 GANSS, HERMAN O.,
 GARDINER, CHARLES B.,
 GARRARD, MISS MARGARET H.,
 GARRETT, JOHN W.,
 GARRETT, MISS LAURA B.,
 GARRETTSON, MISS HELEN JAY,
 GATES, MOODY B.,
 GAWTRY, LEWIS B.,
 GEBBING, DR.,
 GEDDES, DONALD G.,
 GEISLER, MAX,
 GELLER, MRS. F.,
 GENTHE, ARNOLD,
 GEORGE, G. K.,
 GERDES, THEODORE R. N.,
 GERRY, PETER G.,
 GERRY, ROBERT L.,
 GERST, EDGAR A.,
 GERSTENDORFER, ALBERT,
 GIBB, MRS. H. E.,
 GIBBONS, MRS. GEORGE B.,
 GIBBS, GEORGE,
 GIBSON, H. D.,
 GIBSON, W. FRAZER,
 GILSEY, HENRY,
 GLASS, REUBEN E.,
 GLAZIER, HENRY S.,
 GLEASON, HERBERT P.,
 GLENN, JOHN M.,

GLYN, W. E.,
 GODDARD, MRS. FREDERIC N.,
 GODDARD, MRS. MORRILL,
 GODFREY, MRS. E. D.,
 GODLEY, GEORGE McM.,
 GODWIN, FREDERICK M.,
 GOELL, JACOB,
 GOETCHIUS, MRS. J. M.,
 GOETZ, RODERICK S.,
 GOLDAN, DR. S. ORMOND,
 GOLDBERG, R. L.,
 GOLDMANN, JULIUS,
 GOLDSMITH, DR. ALFRED N.,
 GOLDWATER, HENRY,
 GOMAN, MRS. HENRY A.,
 GOOD, REV. ROBERT,
 GOOD, MRS. WILLIAM HOWARD,
 GOODHUE, CHARLES E.,
 *GOODWIN, GEORGE B.,
 GOODWIN, GRENVILLE,
 GOODWIN, H. SAGE,
 GOODWIN, MRS. J. J.,
 GOODWIN, JAMES L.,
 GOODWIN, JOHN B. L.,
 GOODWIN, WALTER L.,
 GOODYEAR, DAVID C.,
 GOTTHOLD, ARTHUR F.,
 GOTTHOLD, FREDERIC,
 GOULD, C. C.,
 GOULD, CHARLES W.,
 GOULD, MRS. EDWIN,
 GRAF, WILLIAM,
 GRAHAM, MRS. GEORGE S.,
 GRANT, MRS. DE FOREST,
 GRANT, MRS. ROLLIN PIERSON,
 GRANT, E. R.,
 GRAVES, GEORGE COE,
 GRAVES, HENRY, JR.,
 GRAY, HENRY G.,
 GRAY, PRENTISS N.,
 GREENOUGH, JOHN,
 GREENOUGH, MRS. JOHN,
 GREENWOOD, JOSEPH R.,
 GREER, MRS. LOUIS MORRIS,
 GREGG, WILLIAM C.,
 GREGORY, FRANKLIN U.,
 GRIFFIN, WILLIAM V.,
 GRIFFITH, MISS SUSAN D.,
 GRIGG, HARRY K.,
 GRINNELL, E. MORGAN,
 GRISWOLD, MRS. F. GRAY,
 GRISWOLD, WILLIAM E. S.,
 GROSVENOR, MISS ROSA ANNE,
 GRUHL, EDWIN,
 GRUNER, WILLIAM C.,

*DECEASED

GUDERNATSCH, DR. F.,
 GUGGENHEIM, HARRY F.,
 GUGGENHEIM, SIMON,
 GUGGENHEIMER, MRS. CHARLES,
 GUGGENHEIMER, MRS. ELIZA,
 GUINZBURG, A. M.,
 GULICK, ARCHIBALD A.,
 GUTHRIE, MRS. CHARLES S.,
 GUTMAN, DEWITT,
 GUTTAG, HENRY,
 GWINN, RALPH W.,
 HAAS, GEORGE C.,
 HADDEN, HAMILTON,
 HAFEN, JOHN M.,
 HAFEN, MRS. WILHELMINA,
 HAGE, JOHN D.,
 HAIGHT, CHARLES S.,
 HAINES, CHARLES D.,
 *HALL, A. C.,
 HALL, HENRY J. S.,
 HALL, MISS JANE.
 HALL, WILLIAM W.,
 HALLOCK, CHARLES P.,
 HALSEY, MRS. CHARLES W.,
 HAMANN, WILLIAM A.,
 HAMBLETON, T. EDWARD,
 HAMERSLEY, LOUIS GORDON,
 HAMILTON, MISS ELIZABETH S.,
 HAMILTON, MRS. MORGAN,
 HAMLIN, MRS. HARRY L.,
 HAMMER, TRYGVE,
 HAMMOND, MRS. JOHN HENRY,
 HAMMOND, LYMAN P.,
 HAMMOND, PAUL,
 HANCE, JOHN A.,
 HANDY, PARKER D.,
 HANSON, MISS BETTY,
 HARDER, F. KENNETH,
 HARDIN, WILLIAM B.,
 HARE, MORIN S.,
 HARMON, MRS. BENEDICT,
 HARNISCHFEGGER, P.,
 HARRIMAN, W. A.,
 HARRIS, ALBERT H.,
 HARRIS, CHARLES C.,
 HARRIS, GEORGE UPHAM,
 HARRIS, MRS. VICTOR,
 HARRISON, DR. CALVIN L.,
 HARRISON, MRS. W. HENRY,
 HARRISON-BERLITZ, V.,
 HART, GEORGE,
 HARTSTORNE, J. M.,
 HASTINGS, MRS. THOMAS,
 HATFIELD, JOSHUA,
 HAVEMEYER, HENRY O.,

HAVEN, J. WOODWARD,
 *HAVENS, ALBERT G.,
 HAWKES, MISS EVA,
 HAY, CLARENCE L.,
 HAYES, HIS EMINENCE, CARDINAL,
 HAYES, DR. WILLIAM VAN VALZAH,
 HAYNES, WILLIAM DEFOREST,
 HAYWARD, MISS LYDIA,
 HAZEN, GEORGE H.,
 HECK, GEORGE C.,
 HECK, HEINZ,
 HECKARD, LT. COL. W. A.,
 HECKSCHER, MRS. AUGUST,
 HEIDE, MISS BERTHA,
 HEIDE, HENRY, JR.,
 HEIDE, HERMAN L.,
 HEIDE, JULIUS A.,
 HEIMAN, E.,
 HEINTZ, JOHN C.,
 HEITMAN, JOHN,
 HEKMA, JACOB,
 HELME, MRS. GEORGE A.,
 HELVING, FRANK,
 HENCKEN, HANCKE,
 HENDERSON, ALTON S., M.D.,
 HENDERSON, NORMAN,
 HENNESSY, JOSEPH P.,
 HENRIOT, DR. JULES M.,
 HENRY, FRANCIS A.,
 HENRY, MRS. RYDER,
 HEPBURN, MRS. A. BARTON,
 HERMANN, BERNARD F.,
 HERNSTADT, WILLIAM L.,
 HERRICK, HAROLD,
 HERRMAN, MRS. HENRY S.,
 HERSHEY, ANDREW H.,
 HERZ, FRED W.,
 HERZOG, SAMUEL A.,
 HESS, DR. ALFRED F.,
 HEWITT, MRS. LUCY W.,
 HEWITT, MISS SARAH C.,
 HEYDT, CHARLES E.,
 HICKS, JOHN M. W.,
 HICKS, MISS M. HELEN,
 HIGGINS, RICHARD H.,
 HILL, E. B.,
 HILL, FREDERICK TREVOR,
 HILL, ROBERT C.,
 HINTON, ALFRED P.,
 HIRSCH, MISS BLANCHE,
 HIRSCH, CHARLES S.,
 HIRSCHLAND, FRANZ H.,
 HOADLEY, MRS. ELIOT BETTS,
 HOCHSCHILD, BERTHOLD,
 HOCHSCHILD, H. A.,

*DECEASED

HOE, ARTHUR F.,
 HOE, MRS. ROBERT,
 HOFFMAN, F. B.,
 HOFFMAN, MISS M. U.,
 HOFFMAN, MRS. WILLIAM M. V.,
 HOFFMAN, W. W.,
 HOGAN, MRS. JEFFERSON,
 HOGG, KENNETH S.,
 HOLBROOK, MRS. EDWARD,
 HOLLENBACK, MISS AMELIA B.,
 HOLLINGWORTH, DR. W. G.,
 HOLLISTER, MISS GLORIA ELAINE
 *HOLMES, CHARLES LEYLAND,
 HOLMES, GEORGE E.,
 HOLT, ROBERT S.,
 HOLTER, MRS. E. O.,
 HOLTON, CHARLES W.,
 HOLTON, OLIVER W.,
 HOLZWORTH, JOHN M.,
 HOMES, HENRY F.,
 HOOKER, DR. RANSOM S.,
 HOOLEY, EDWIN S.,
 HOOVER, LORING R.,
 HOPKINS, D. S.,
 HOPPIN, BAYARD C.,
 HOPPIN, MISS FRANCES,
 HOPPIN, WILLIAM W., JR.,
 HORNADAY, MRS. JOSEPHINE C.,
 HORR, L. WILLIAM,
 HOSKIER, H. C.,
 HOUGHTON, CLEMENT S.,
 HOUSMAN, CLARENCE J.,
 HOWELL, MAXWELL D.,
 HOWELL, T. A.,
 HOWELLS, MRS. JOHN MEAD,
 HOWLAND, MRS. HENRY E.,
 HOXIE, W. D.,
 HOYER, F.,
 HOYT, ALFRED O.,
 HOYT, GEORGE S.,
 *HOYT, GERALD L.,
 HOYT, MRS. HENRY R.,
 HOYT, JOHN SHERMAN,
 HOYT, MRS. RICHARD F.,
 HOYT, MISS VIRGINIA SCOTT,
 HUBBARD, MRS. J. M.,
 HUDSON, MRS. MARJORIE V. L.,
 HUGHES, CHARLES E., JR.,
 HUGHES, JOHN,
 HUNTINGTON, FORD,
 HUNTINGTON, HENRY S.,
 HUPFEL, J. CHRISTIAN G.,
 HURD, MRS. RICHARD M.,
 HURDMAN, FREDERICK W.,
 HURLBUT, MISS MARGARET C.,

HUTCHINS, AUGUSTUS SCHELL,
 HUTCHINS, HARLEY D.,
 HUTCHINSON, CARY T.,
 HUTTON, E. F.,
 HUYLER, C. D.,
 HUYLER, F. D.,
 HYATT, JOHN S.,
 HYDE, B. T. BABBITT,
 HYDE, E. FRANCIS,
 HYDE, DR. FREDERICK E.,
 HYDE, GEORGE H.,
 HYDE, SEYMOUR WORRALL,
 ILLINGWORTH, CLARENCE,
 IMBODEN, H. M., M.D.,
 INGALLS, WALTER RENTON,
 INGERSOLL, ERNEST,
 INGRAHAM, HENRY A.,
 INSLEE, EDWIN W.,
 IRWIN, WALLACE,
 ISAACS, STANLEY M.,
 ISELIN, C. OLIVER,
 ISELIN, MISS GEORGINE,
 ISELIN, MRS. LEWIS,
 ISELIN, MISS LOUISE M.,
 ISELIN, WILLIAM E.,
 ISELIN, MRS. WILLIAM E.,
 ISELIN, WILLIAM O'DONNELL,
 ISHAM, WILLIAM B.,
 ISRAEL, LEON,
 IVES, RAYMOND,
 JACHES, DR. LEOPOLD,
 JACKSON, FREDERICK W.,
 JACKSON, MRS. FREDERICK W.,
 JACOBS, SAMUEL KELLER,
 JACOBUS, JOHN S.,
 JACQUELIN, HERBERT T.B.,
 JAECKEL, MRS. H. FRANCIS,
 *JAFFRAY, ROBERT,
 JAMES, MRS. ARTHUR CURTISS,
 JAMES, HENRY,
 JAMES, HENRY, JR.,
 JAMES, MRS. WALTER B.,
 JAMES, MRS. WORTHAM,
 JAMESON, MRS. EDWIN C.,
 JARECKI, MRS. F. C.,
 JENKINS, A. W.,
 JENKINS, GUY S.,
 JENKINS, MRS. HELEN H.,
 JENKINS, WILLIAM B.,
 JENKS, ROBERT I.,
 JENNINGS, SIDNEY J.,
 JENNINGS, WALTER,
 JESUP, EDWARD N.,
 JEWETT, MRS. MAUDE SHERWOOD,
 JOHN, ROBERT,

*DECEASED

- JONES, MRS. WILLIAM FOULKE
 JOHNSON, F. COIT,
 JOHNSON, GILBERT H.,
 *JOHNSON, THOMAS W.,
 JOHNSTON, J. HERBERT,
 JOHNSTON, DR. MARIUS E.,
 JONES, MRS. CADWALADER,
 JONES, DEWITT CLINTON,
 JONES, MRS. DWIGHT A.,
 JONES, H. BOLTON,
 JONES, H. K., JR.,
 JONES, H. LEROY,
 JONES, LEWIS Q.,
 JONES, PERCY C.,
 JONES, MISS REBECCA,
 JUDSON, WILLIAM D.,
 KACHURIN, PHILIP,
 KADEL, JOHN,
 KAHN, FELIX E.,
 KAHN, MRS. OTTO H.,
 KAHN, WALTER N.,
 KALISH, MISS ANNIE,
 KANE, MRS. ARTHUR S.,
 KANE, MRS. DELANCEY,
 KANTOR, DR. MARK G.,
 KARELSEN, EPH. A.,
 KATENKAMP, J. F.,
 KATZ, WILLIAM,
 KAUFMANN, C. B.,
 KEAN, HAMILTON FISH,
 KEAN, MRS. HAMILTON FISH,
 KEAN, ROBERT WINTHROP,
 KEECH, FRANK B.,
 KEECH, MRS. FRANK BROWNE,
 KEELER, MRS. C. B.,
 KEIL, HENRY F.,
 KELCHNER, WILLIAM W.,
 KELLEY, NICHOLAS,
 KELLY, DR. HOWARD A.,
 KEMPLAND, WILLIAM C., JR.,
 KEMSLEY, RAYMOND E.,
 KENNEDY, EDWARD G.,
 KENNEDY, MRS. H. VAN RENSSELAER,
 KENNEDY, MRS. JOHN STEWART,
 KENNELLY, MAJOR WILLIAM,
 KENNERLY, MISS M. M.,
 KENT, EDWIN C.,
 KEPPEL, DAVID,
 KETCHAM, EDWARD C.,
 KETCHAM, IRVING M.,
 KEUFFEL, W. G.,
 KEYES, MRS. CHARLES W.,
 KIERNAN, PETER D.,
 KILBRETH, JAMES T.,
 KILMARX, LOUIS E.,
 KIMBALL, MRS. E. A.,
 KING, MRS. AUGUSTUS F.,
 KING, EDWARD D.,
 KING, MISS ELLEN,
 KING, MISS ETHEL,
 KING, HARRY L.,
 KING, JAMES GORE,
 KING, MISS MINNIE P.,
 KINGSFORD, IRVING B.,
 KINGSLEY, W. M.,
 KINKEAD, MISS JENNIE H.,
 KINNEY, WARREN,
 KINNEY, MRS. WARREN,
 KIP, W. RULOFF,
 KIRK, LOUIS E.,
 KIRKHAM, WILLIAM B.,
 KIRKMAN, SIDNEY A.,
 KISSEL, MRS. W. THORN,
 KITCHEL, ALLAN F.,
 KITTREDGE, SAMUEL DANA,
 KLAU, MARC,
 KLEIN, D. EMIL,
 KLEIN, MILTON M.,
 KLINGENSTEIN, CHARLES,
 KLOTS, ALLEN TRAFFORD, JR.,
 KLUGMAN, J.,
 KNAPP, ARNOLD,
 KNAPP, WILLIAM J.,
 KNOEDLER, ROLAND F.,
 KNOLLENBERG, BERNHARD,
 KNOWLTON, EVAN B.,
 KNOWLTON, HUGH,
 KOCH, EDWARD R.,
 KOEGEL, WALTER J.,
 KOLB, FRED.,
 KOLB, GEORGE C., JR.,
 KOLES, DR. HENRY M.,
 KOLLSTEDE, C. A.,
 KONTA, ALEXANDER,
 KOSTER, DR. HARRY,
 KRAUSE, HOLGER E.,
 KRECH, MRS. ALVIN W.,
 KRUEGER, RICHARD G.,
 KUHN, AUGUST,
 KUHN, FRANK,
 KUHN, JULIUS,
 KUMPF, GEORGE L.,
 KUNHARDT, MRS. HENRY R.,
 KUNZ, GEORGE F.,
 KURSHEEDT, ALPHONSE H.,
 KURZMAN, CHARLES C.,
 KUSER, MRS. ANTHONY R.,
 KUSER, MISS CYNTHIA G.D.,
 KUSER, JOHN DRYDEN,
 KUSER, JOHN L.,

*DECEASED

KUTTROFF, ADOLF,
 LABROT, W. H.,
 LADD, WILLIAM SARGENT, M.D.,
 LAGAI, DR. GEORGE,
 LAGEMANN, C.,
 LAIMBEER, JOHN,
 LAMBERT, DR. ADRIAN V. S.,
 LAMBERT, DR. ALEXANDER,
 LAMBERT, DR. SAMUEL W.,
 LAMBERT, MRS. SAMUEL W.,
 LAMBORN, A. H.,
 LAMONT, MRS. THOMAS WILLIAM,
 LANDAUER, I. N.,
 LONDON, FRANCIS G.,
 LONDON, HAROLD M.,
 LANE, JAMES WARREN,
 LANE, MISS KATHARINE W.,
 LANE, WOLCOTT G.,
 LANGE, MISS CARMEN,
 LANGELOTH, MRS. VALERIA,
 LANIER, MRS. JAMES F. D.,
 LANMAN, LUDLOW T.,
 LAPHAM, MRS. JOHN J.,
 LATTING, CHARLES P.,
 LAUDER, MRS. GEORGE, JR.,
 LAUTERBACH, MRS. AMANDA F.,
 LAWRENCE, JOHN BURLING,
 LAWRENCE, R. WARREN,
 LAWRENCE, TOWNSEND,
 *LAWRENCE, W. V.,
 LAZO, ANTONIO,
 LEA, CHARLES M.,
 LEACH, HENRY GODDARD,
 LEDLIE, GEORGE,
 LEDYARD, MRS. LEWIS C.,
 LEE, MRS. FREDERIC S.,
 LEE, DR. HENRY T.,
 LEE, SAMUEL,
 LEFFERTS, MRS. GILLET,
 LEFFERTS, MARSHALL C.,
 LEFFINGWELL, R. C.,
 LEFKOVICS, MRS. JULIET,
 LEGG, GEORGE,
 LEGGETT, WARREN F.,
 LEHMAIER, JAMES M.,
 LEHMAN, HAROLD M.,
 LEONARD, MRS. H. WARD,
 LEONHARD, J. HENRY,
 LERNER, MICHAEL,
 LERNER, SAMUEL O.,
 LEROY, EDWARD A.,
 LESLIE, MRS. J. C.,
 LESTER, A. EDWARD,
 LESTER, HENRY M.,
 LESTER, WILLIAM C.,

LEVEY, CHARLES BISPHAM,
 LEVIENNE, MRS. SONIA,
 LEVY, EDGAR A.,
 LEVY, LOUIS S.,
 LEWIS, MRS. AUGUST,
 LEWIS, EDWARD J.,
 LEWIS, MISS MARY FREDERICA,
 LEWIS, DR. WILLIAM J.,
 LEWISOHN, ADOLPH,
 LEWISOHN, SAMUEL A.,
 LICHTENSTEIN, OSCAR R.,
 LIEB, CHARLES C.,
 LIEB, J. W.,
 LIEBSTEIN, DR. A. M.,
 LILIENTHAL, DR. HOWARD,
 LINCOLN, FREDERIC W.,
 LINDBERG, HARRIE T.,
 LIPPINCOTT, W. J.,
 LISSAUER, ROBERT,
 LISSBERGER, MILTON L.,
 LITCHFIELD, E. HUBERT,
 LITCHFIELD, EDWARD H.,
 LIVERMORE, P. W.,
 LIVINGSTON, MISS ANNA P.,
 LIVINGSTON, EDWARD DE P.,
 LIVINGSTON, GOODHUE, JR.,
 LLOYD-SMITH, WILTON,
 LOBENSTINE, MRS. WILLIAM C.,
 LOCKE, MRS. MABEL DUNHAM,
 LOCKETT, A. H.,
 LOCKETT, MRS. A. H.,
 LOEWI, HUGO V.,
 LOEWY, EDMUND C.,
 LOGAN, MISS FLORENCE L.,
 LOOK, DAVID M.,
 LOOMIS, GUY,
 LORD, MISS E. C.,
 LORSCH, HENRY,
 LOUNSBERY, MISS ALICE,
 LOVELAND, ALFRED E.,
 LOW, ETHELBERG IDE,
 LOW, SETH,
 *LOWELL, GUY,
 LOWELL, JAMES B.,
 LOWTHER, CHRISTOPHER M.,
 LUDINGTON, C. H.,
 LUDLAM, MALCOLM C.,
 LUDLOW, MRS. BANYER,
 LUDLUM, C. A.,
 LUEDER, C. G.,
 LUEDER, E. L.,
 LUKE, ADAM K.,
 LUKE, DAVID L.,
 LUSK, PROF. GRAHAM,
 LUTKINS, CLINTON S.,

*DECEASED

LYMAN, FRANK,
 LYMAN, MISS GRACE GREENLEAF,
 LYMAN, THEODORE,
 McADOO, F. H.,
 McALPIN, MRS. CHARLES W.,
 McALPIN, DR. D. H.,
 McALPIN, MRS. D. HUNTER, JR.,
 McALPIN, DR. K. R.,
 McBride, MRS. HERBERT,
 McCABE, T. T.,
 McCAGG, LOUIS B.,
 McCALL, RICHARD,
 McCARTER, GEORGE W. C.,
 McCREA, W. S.,
 McCREERY, HENRY FORBES,
 McCULLOH, J. S.,
 McCUTCHEON, GEORGE BARR,
 McDONALD, C. ERIC W.,
 McEWEN, ALFRED,
 McEWEN, PAUL,
 McEWEN, MRS. PAUL,
 McFADDEN, PHILIP G.,
 McFADDEN, MRS. W. A.,
 McFARLIN, W. K.,
 McGUSTY, MRS. ROBERT T.,
 McILHENNY, EDWARD A.,
 McKAY, MRS. ROBERT,
 McKAY, ROBERT GORDON,
 McKELVEY, J. J.,
 McKELVEY, ROBERT,
 *McKIM, JOHN A.,
 McKIM, LEROY,
 McLANE, THOMAS S.,
 McMANUS, EDWARD F.,
 McMATH, ROBERT R.,
 McMILLAN, FRANCIS W.,
 McNAIR, WILLIAM,
 McNAUGHTON, LAWRENCE T.,
 MAAS, MILTON A.,
 MAC CRACKEN, MRS. GEORGE G.,
 MACDONALD, RONALD H., JR.,
 MACENULTY, J. F.,
 MACFARLANE, WALLACE,
 MACK, ARTHUR C.,
 MAGEE, JOHN,
 MAGER, F. ROBERT,
 MAGNUS, MISS HELAINE,
 MATTLAND, JAMES W.,
 MALL, MRS. PIERRE,
 MALLORY, ROBERT, JR.,
 MALONE, L. WILLIAM,
 MANN, MRS. GEORGE W.,
 MANN, S. VERNON,
 MANSFIELD, HOWARD,
 MANVILLE, H. E.,

MANVILLE, T. F., JR.,
 MAPES, EUGENE E.,
 MARCKWALD, ALBERT H.,
 MARCUSE, ALEXANDER J.,
 MARESI, POMPEO M.,
 MARIENHOFF, MISS BETH,
 MARKHAM, ROBERT D.,
 MARKLE, JOHN,
 MARKOE, HARRY,
 MARQUAND, MRS. HENRY,
 MARSH, CHARLES CAPRON,
 MARSHALL, A. W. W.,
 MARSHALL, CHARLES C.,
 MARSTON, HUNTER S.,
 MARTIN, BRADLEY, JR.,
 MARTIN, MRS. GRINNELL,
 MARTIN, MRS. HOWARD TOWNSEND,
 MARTIN, MRS. SHELTON E.,
 MARTIN, DR. WALTON,
 MARVIN, LANGDON P.,
 MARVIN, MRS. LANGDON P.,
 MARYE, R. V.,
 MASON, C. N.,
 MASTEN, ARTHUR H.,
 MASTERS, FRANCIS R.,
 MATHER, SAMUEL,
 MATTHEWS, DR. FRANK CAMERON,
 MATZKE, ADOLPH,
 MAXWELL, FRANCIS TAYLOR,
 MAXWELL, GEORGE T.,
 MAXWELL, HOWARD W.,
 MAXWELL, WILLIAM,
 MAYER, B.,
 MAYER, JOSEPH B.,
 MAYER, MISS ROSALYNDE DE LIMA,
 MAYNARD, MRS. WALTER E.,
 MEAD, W. S. MORTON,
 MEEHAN, IRVING H.,
 MEEKER, HENRY E.,
 MEGEATH, S. A.,
 MEINHARD, MORTON H.,
 MELLON, E. P.,
 MELLON, MRS. E. P.,
 MELOY, ANDREW D.,
 MERCER, MRS. MARTHA DANA,
 MERCER, WILLIAM R.,
 MERRILL, EDWIN G.,
 MESERVE, FREDERICK H.,
 MESSENGER, MISS MARIA GERARD,
 METCALFE, CAPT. HENRY,
 MEURER, JACOB,
 MEYER, MRS. CHARLES G.,
 MEYER, EUGENE, JR.,
 MEYER, J. EDWARD,
 MEYROWITZ, EMIL B.,

*DECEASED

MICHALIS, MRS. CLARENCE G.,
 MIDDLEBROOK, FREDERICK,
 MIDDLETON, CORNELIUS W.,
 MILBURN, JOHN G.,
 MILES, MRS. BOLDT,
 MILLER, MRS. CHARLES E.,
 MILLER, MRS. ELIZABETH C. T.,
 MILLER, LAWRENCE MCK.,
 MILLER, W. W.,
 MILLETT, JOSEPH B.,
 MILLETT, S. C.,
 MILLHISER, MRS. REGINA V. G.,
 MILLIKEN, MRS. GERRISH H.,
 MILLS, ABRAHAM G.,
 MILLS, ANDREW,
 MILLS, FREDERIC C.,
 MILMINE, MRS. C. E.,
 MILNE, CLYDE,
 MITCHELL, CHARLES E.,
 MITCHELL, GRANT,
 MITCHELL, S. A.,
 MITCHELL, MRS. S. ROGER,
 MITCHELL, MRS. WALTER I.,
 MONTGOMERY, CARLETON,
 MONTGOMERY, MRS. LOTTIE D.,
 MONTGOMERY, ROBERT H.,
 MOORE, BARRINGTON,
 MOORE, MRS. CASIMIR DER.,
 *MOORE, MISS K. T.,
 MOORHEAD, HORACE R.,
 MORAN, CHARLES,
 MORAWETZ, VICTOR,
 MOREHEAD, JOHN M.,
 MORGAN, MISS ANNE,
 MORGAN, MISS C. L.,
 MORGAN, EDWIN D.,
 MORGAN, JUNIUS S., JR.,
 *MORGAN, MRS. PIERPONT,
 MORGAN, WALLACE,
 MORGAN, WILLIAM FELLOWES,
 MORGAN, WILLIAM FORBES, JR.,
 MORGENTHAU, M. I.,
 MORRIS, DAVE H.,
 MORRIS, LEWIS SPENCER,
 MORRIS, RICHARD L.,
 MORRISON, MRS. CHARLES KING,
 MORRISON, N. H.,
 MORSE, HOWARD M.,
 MORTIMER, STANLEY GRAFTON,
 MORTON, MRS. PAUL,
 MOSES, SAMUEL T.,
 MOSLE, A. HENRY,
 MOSMAN, PHILIP A.,
 MOTLEY, JAMES M.,
 MOTT, MRS. JOHN BOWNE,

MOYER, ALBERT,
 MUIHLFELD, FRANK J.,
 MULFORD, EDWIN H.,
 *MULLER, CARL,
 MUNN, JOHN P.,
 MURGATROYD, JOHN,
 MURPHY, GRAYSON, M. P.,
 MURRAY, R. D.,
 MURTHA, THOMAS F.,
 MUSCHENHEIM, FREDERICK A.,
 MYERS, FRANK J.,
 MYERS, GEORGE S.,
 MYGATT, KENNETH,
 NADAL, MRS. CHARLES C.,
 NADELMAN, MME. EILE,
 NADLE, HENRY,
 NATHAN, HAROLD,
 NAUMBURG, GEORGE W.,
 NAUMBURG, MRS. WALTER W.,
 NEILSON, DR. HOWARD S.,
 NEILSON, WALLACE PLATT,
 NESMITH, JAMES,
 NEUMOEGEN, M.L.,
 NEUMOEGEN, MRS. M.L.,
 NEUSTADT, MRS. S.,
 NEWCOMBE, MRS. CHARLES M.,
 NEWINGTON, HARRY M.,
 NEWSON, WILLIAM M.,
 NEWTON, F. MAURICE,
 NICHOLS, ACOSTA,
 NICHOLS, MRS. GEORGE,
 NICHOLS, MRS. JOHN W.T.,
 NICKERSON, HOFFMAN,
 NICOLL, MRS. BENJAMIN,
 NISBETT, DR. J. DOUGLAS,
 NORMAN, MRS. BRADFORD,
 NORMAN, EDWARD A.,
 NORRIS, CHARLES, M.D.,
 NORTH, GEORGE B.,
 NORTON, MRS. EDWIN,
 NOTMAN, GEORGE,
 NOTMAN, HOWARD,
 O'BRIEN, PERCY J.,
 OCHS, ADOLPH S.,
 O'CONOR, JOHN C.,
 O'DONOHUE, MISS TERESA R.,
 OFFERMAN, JOHN,
 OGDEN, CHARLES W.,
 OGDEN, MISS MARY F.,
 OGLE, MRS. PONSONBY,
 OHMEIS, JOHN,
 OHMEIS, P. M.,
 OLCOTT, ALFRED V. S.,
 OLCOTT, DUDLEY,
 OLCOTT, E. E.,

*DECEASED

OLIN, MRS. STEPHEN H.,
 OLNEY, ELAM WARD,
 OLYPHANT, ROBERT,
 OPENHYM, GEORGE J.,
 OPPENHEIMER, DAVID E.,
 ORDWAY, SAMUEL H.,
 O'ROURKE, MRS. P. F.,
 ORVIS, MRS. WARNER DAYTON,
 ORTH, CHARLES D., SR.,
 OSBORN, MISS JOAN ADAMS,
 OTHEMAN, MRS. FRANCES W.,
 OTIS, MRS. GEORGE L.,
 OTIS, DR. WALTER J.,
 OUTERBRIDGE, MRS. ADOLPH J.,
 OUTHWAITE, LEONARD,
 OVERTON, CLOUGH C.,
 OVINGTON, CHARLES K.,
 PACKARD, JOHN H.,
 PADDOCK, MRS. EUGENE H.,
 PADDOCK, MRS. ROBERT L.,
 PAGE, ARTHUR W.,
 PAGE, CECIL,
 PAINE, MRS. AUGUSTUS G.,
 PAINTER, DR. H. McM.,
 PALMER, MISS ALICE W.,
 PALMER, EDGAR,
 PALMER, HOWARD,
 PALMER, DR. T. S.,
 PARDOE, DR. J. B.,
 PARISH, MRS. EDWARD C.,
 PARISH, WAINWRIGHT,
 PARKER, HERBERT,
 PARKER, JUNIUS,
 PARKER, WINTHROP,
 PARKS, ELTON,
 *PARSONS, MISS GERTRUDE,
 PARSONS, MISS MARY,
 PARSONS, WILLIAM BARCLAY,
 PARTRIDGE, DR. EDWARD L.,
 PASK, MARSHALL W.,
 PATTERSON, HENRY STUART,
 PATTERSON, RUFUS L.,
 PATTERSON, T. H. HOGE,
 PAUL, JOHN GILE,
 PAULDING, CHARLES C.,
 *PAYNE, CHARLES THOMAS,
 PAYNE, MRS. HENRY W.,
 PEABODY, STEPHEN,
 PEACOCK, MRS. CHARLES A.,
 PEARSON, MRS. FREDERICK,
 PECK, CHARLES E.,
 *PECK, DR. CHARLES H.,
 PECK, E. STUART,
 PECK, MORTON R., M.D.,
 PECKHAM, MRS. WHEELER H.,

PEET, W. C.,
 PELL, JAMES D.,
 PELL, W.,
 PENDLETON, FRANCIS KEY,
 PENNOYER, PAUL G.,
 PERIN, C. P.,
 PERINE, WILLIAM DE NYSE,
 PERKINS, MRS. CHARLES ALBERT,
 PERKINS, GEORGE W., JR.,
 PERKINS, MRS. GEORGE W.,
 PERKINS, MISS HATTIE W.,
 PETERS, MRS. CHARLES G.,
 PETERS, THEODORE,
 PETERS, WILLIAM RICHMOND,
 PETERSON, RUDOLF M.,
 PETRASCH, MRS. CARL S.,
 PETROVA, MME. OLGA,
 PFEIFFER, GEORGE,
 PFORZHEIMER, CARL H.,
 PFORZHEIMER, WALTER,
 PFRIEMER, CHARLES JOSEPH,
 PHELPS, DR. GOUVERNEUR M.,
 PHELPS, MRS. SHEFFIELD,
 PHILLIPS, WILLIAM W.,
 PIATTI, DR. VIRGIL C.,
 PICKHARDT, CARL,
 PICKHARDT, W. P.,
 PIERREPONT, R. STUYVESANT,
 PIERSON, GEN. J. FRED,
 PINCHOT, GIFFORD,
 PINCHOT, MRS. MINTURN,
 PIRIE, S. C.,
 PITNEY, MRS. J. O. H.,
 PLACE, IRA A.,
 PLANT, HENRY B.,
 PLATT, HENRY B.,
 PLATT, LIVINGSTON,
 POCKNELL, A. G.,
 POEL, FRANK,
 POLK, FRANK L.,
 POLLITZER, DR. S.,
 POMROY, DANIEL E.,
 POOL, DR. EUGENE H.,
 POOLE, ABRAM,
 POOR, HENRY V.,
 POPE, G. D.,
 POPE, MRS. JAMES E.,
 POPPER, MRS. WILLIAM C.,
 PORTER, ALEXANDER J.,
 PORTER, LOUIS H.,
 POST, ABRAM S.,
 POST, GEORGE B.,
 POST, RICHARD HOWELL,
 POTTER, MISS BLANCHE,
 POTTER, J. W. FULLER,

*DECEASED

POTTER, R. BURNSIDE,
 POTTIER, AUGUSTE R.,
 POTTS, CHARLES E.,
 POTTS, WILLIAM BREVOORT,
 POWELL, STEPHEN A.,
 POWERS, MRS. JOHN C.,
 PRATT, ALEXANDER D. B.,
 PRATT, A. G.,
 PRATT, MRS. HAROLD,
 PRATT, HERBERT L.,
 PRATT, JOHN T.,
 PRATT, MRS. JOHN T.,
 PRENTICE, E. P., JR.,
 PRENTISS, MISS HENRIETTA,
 PRENTISS, MARSHALL,
 PRESCOTT, SIHERBURNE,
 PRESTON, VERYL,
 PRIDDY, LAWRENCE,
 PRINCE, EDWARD S.,
 PROCTOR, FREDERIC W.,
 PROCTOR, MRS. L. SANFORD,
 PROCTOR, WILLIAM,
 PROCTOR, MRS. CHARLES E.,
 PROCTOR, WILLIAM ROSS,
 PULITZER, MRS. JOSEPH,
 PULSIFER, HAROLD TROWBRIDGE,
 PUTNAM, ALBERT W.,
 PUTNAM, MRS. GEORGE HAVEN,
 PUTNAM, IRVING,
 PUTNEY, MISS EVA C.,
 PYLE, D. H. McALPIN,
 PYLE, JAMES McALPIN,
 PYLE, MRS. JAMES TOLMAN,
 PYLE, MRS. WILLIAM SCOTT,
 PYNE, MEREDITH H.,
 PYNE, MRS. M. TAYLOR,
 PYNE, MRS. PERCY R.,
 QUINTARD, DR. EDWARD,
 RABENAU, HERMAN,
 RAISLER, SAMUEL,
 RANGER, STANLEY G.,
 RASMUS, W. T.,
 RAYNER, WILLIAM,
 RAYMOND, H. E.,
 READ, MRS. WILLIAM A.,
 READ, WILLIAM A., JR.,
 REDMOND, MISS EMILY,
 REDMOND, MRS. HENRY S.,
 REDMOND, ROLAND L.,
 REED, ALDEN,
 REED, MISS BERTHIA M.,
 REED, CHARLES,
 REED, MRS. CHESTER T.,
 REED, ROBERT R.,
 REEDS, CHESTER A.,

REEVES, MARK W.,
 REID, OGDEN MILLS,
 REID, MRS. OGDEN MILLS,
 REID, WALLACE,
 REID, MRS. WHITELAW,
 REISCHMAN, HENRY R.,
 REISINGER, CURT. H.,
 REMINGTON, FRANKLIN,
 REMINGTON, SETH P.,
 REMSEN, LESTER C.,
 RENNIE, ROBERT,
 *RENNULT, WILLIAM,
 RENWICK, EDWARD BREVOORT,
 RESOR, STANLEY,
 REUHL, GEORGE ALBERT,
 REYNAL, MRS. E. S.,
 REYNOLDS, R. C.,
 REYNOLDS, THOMAS A.,
 RHEINAUER, DANIEL,
 RHOADES, MRS. LYMAN,
 RICE, C. H.,
 RICE, GRANTLAND,
 RICE, ORAN WINTHROP,
 RICHARD, MISS ELVINE,
 RICHARD, OSCAR L.,
 RICHARDS, ELLIS G.,
 RICHARDS, E. O.,
 RICHARDS, MISS HELEN,
 RICHARDSON, CHARLES E.,
 RICHARDSON, JOSEPH W.,
 RICHARDSON, SINCLAIR,
 RIEM, SIMON R.,
 RIGHTER, MISS HARRIET T.,
 RIIS, MISS MARY,
 RIKER, MRS. CHARLES L.,
 RIPLEY, JULIAN A.,
 RIVES, F. BAYARD,
 ROBBINS, CHANDLER,
 ROBBINS, MISS ELIZABETH B.,
 ROBBINS, FRANCIS L., JR.,
 ROBERTS, MRS. CHARLES HENRY,
 ROBERTS, GEORGE,
 ROBERTS, OWEN F.,
 ROBERTS, THOMAS S.,
 ROBERTSON, DR. C. J.,
 ROBERTSON, L. J.,
 ROBINSON, BEVERLEY R.,
 ROBINSON, MRS. C. BONNYCASTLE,
 ROBINSON, CHARLES LARNED,
 ROBINSON, MRS. DOUGLAS,
 ROBINSON, EDWARD,
 ROBINSON, JOHN A., M.D.,
 ROBINSON, KARL H.,
 ROBINSON, MISS PAULINE,
 ROBINSON, W. ATMORE,

*DECEASED

- ROCHE, MRS. BURKE,
 ROCKEFELLER, MRS. J. D., JR.,
 ROCKEFELLER, WILLIAM A.,
 ROCKEFELLER, MRS. WILLIAM G.,
 ROE, FRANK O.,
 ROE, IRVING L.,
 ROELOFS, RICHARD, JR.,
 ROGER, JOHN,
 ROGERS, FRANCIS,
 ROGERS, MRS. FRANCIS,
 ROGERS, G. VERNOR,
 ROGERS, HUBERT E.,
 ROKENBAUGH, HENRY S.,
 ROLBIECKI, REV. DR. JOHN J.,
 ROLLE, AUGUSTUS J.,
 ROLLINS, FRANK S.,
 ROMBOUGH, JOHN B.,
 RONALDS, MISS THORA SCOTT,
 ROOSEVELT, ARCHIBALD B.,
 ROOSEVELT, GEORGE E.,
 ROOSEVELT, MRS. JAMES,
 ROOSEVELT, KERMIT,
 ROOSEVELT, NICHOLAS,
 ROOSEVELT, PHILIP W.,
 ROOSEVELT, W. EMLÉN,
 ROOT, ELIHU,
 ROPES, CHAPMAN,
 ROSE, MRS. A. SUMNER,
 ROSE, MISS RUTH,
 ROSENFELD, HENRY L.,
 ROSENTHAL, SYLVAN E.,
 ROSSITER, ALFRED,
 ROSSITER, LUCIUS T.,
 *ROTH, MAX J.,
 ROTILBART, ALBERT,
 ROTHWELL, JAMES E.,
 ROUND, A. C.,
 ROUNDS, R. S., JR.,
 ROWLAND, THOMAS,
 ROWLEY, CHARLES BUCHANAN,
 RUHE, LOUIS,
 RUHL, LOUIS,
 RUMSEY, MRS. CHARLES CARY,
 RUNYON, CLARKSON,
 RUNYON, E. W.,
 RUPERTI, JUSTUS,
 RUPPRECHT, FREDERICK K.,
 RUSSELL, DR. JOHN F.,
 RUST, HAROLD N.,
 RYAN, GEORGE F.,
 RYAN, JOHN BARRY,
 RYAN, MRS. THOMAS F.,
 RYLE, ARTHUR,
 RYLE, GRAHAM,
 RYLE, MISS JULIA,
 SABIN, CHARLES H.,
 SACKETT, MRS. CHARLES A.,
 SACKETT, MISS HELEN H.,
 SAGE, DEAN,
 SALM, COUNTESS MAUD,
 SAMPSON, CHARLES E.,
 SAND, MISS ALICE L.,
 SANDALGI, REV. PAUL J.,
 SANDHAGEN, H.,
 SANDS, MISS ANNE A.,
 SANDS, MRS. BENJAMIN AYMAR,
 SARD, RUSSELL E.,
 SARG, F. A.,
 SATTERWHITE, PRESTON P.,
 SAUTER, FRED.,
 SCARBURGH, ROBERT STUART,
 SCHALL, W.,
 SCHAUFFLER, MRS. A. F.,
 SCHEFER, ANTON H.,
 SCHENCK, HENRY DEB.,
 SCHEUER, A. L.,
 SCHIEFFELIN, WILLIAM JAY,
 SCHIEREN, CHARLES A.,
 SCHIFF, MRS. JACOB H.,
 SCHILLING, MISS KATHRYN,
 SCHIMMEL, SIEGFELD,
 SCHMELZEL, JAMES H.,
 SCHMELZEL, MISS JANE E.,
 SCHMIDT, KARL,
 SCHMITT, GEORGE,
 SCHNABEL, MISS ADELINE M.,
 SCHNAKENBERG, D.,
 SCHNIEWIND, EWALD H.,
 SCHNIEWIND, H., JR.,
 SCHOEN, CARL,
 SCHOLLE, A. H.,
 SCHONBRUNN, S. A.,
 SCHIRAG, CHARLES A.,
 SCHRAMM, JOHN EDWARD,
 SCHUYLER, MISS LOUISE LEE,
 SCHWAB, HERMANN C.,
 SCHWARTZ, LOUIS F.,
 SCHWARZ, MISS EMILY E.,
 SCHWARZ, HERBERT F.,
 SCHWARZ, MISS IDA T. L.,
 SCHWARZLER, ALBERT J.,
 SCHWEITZER, ISIDOR H.,
 SCOFIELD, MISS MARION,
 SCOTT, DONALD,
 SCOTT, MRS. FRANK H.,
 SCOTT, THOMAS BLYTHE,
 SCOTT, WILLIAM,
 SCOVILLE, HERBERT,
 SCOVILLE, ROBERT,
 SCRIBNER, ARTHUR H.,

*DECEASED

SCRIBNER, CHARLES,
 SCRIBNER, MRS. CHARLES,
 SCUDDER, HEWLETT,
 SEAGLE, MRS. N. A.,
 SEALE, ALVIN,
 SEALY, ROBERT,
 SEAMAN, FRANK,
 SEAMAN, DR. LOUIS L.,
 SEE, A. B.,
 SEFTON, EDWIN,
 SEIDENBERG, OTTO,
 SEIGLE, W. R.,
 SELIGMAN, A. J.,
 SELIGMAN, EDWIN R. A.,
 SELIGMAN, GEORGE W.,
 SELIGMAN, MRS. ISAAC N.,
 SELIGMAN, JEFFERSON,
 SELIGMAN, JOSEPH L.,
 SELIGMAN, WALTER,
 SELLING, MISS GERDA,
 SEMLER, G. HERBERT,
 SENFF, MRS. CHARLES H.,
 SENFF, F. W.,
 SETON, ALFRED,
 SEWARD, J. PERRY, M.D.,
 SEYMOUR, EDMUND,
 SEYMOUR, ORIGEN,
 SHATTUCK, A. R.,
 SHAW, FRANK S.,
 SHAW, JAMES M.,
 SHAW, MRS. WILLIAM NICHOLS,
 SHEETS, DR. ELMER A.,
 SHEFFIELD, JAMES R.,
 SHEFFIELD, MRS. JAMES R.,
 SHELDON, EDWARD W.,
 SHIELDON, WILLIAM C.,
 SHEPARD, FINLEY J.,
 SHEPARD, DR. GEORGE A.,
 SHEPHERD, GEORGE E.,
 SHEPPERD, WALTER,
 SHERMAN, THOMAS T.,
 SHIMAN, DAVID,
 SHOEMAKER, HENRY W.,
 SHONNARD, HORATIO S.,
 SIBLEY, MRS. H. W.,
 SICHEL, MRS. EUGENE A.,
 SIDENBURG, GEORGE M.,
 SIEDENBURG, REINHARD,
 SIEGEL, JACOB,
 SIEGEL, WILLIAM,
 SILLECK, HENRY G., JR.,
 SILLECK, MRS. HENRY G., JR.,
 SIMON, ALFRED L.,
 SIMON, ROBERT E.,
 SIMONS, MISS KATE R.,

SIMPSON, ERNEST L.,
 SINCLAIR, MRS. JOHN,
 SINCLAIR, MRS. WILLIAM,
 SINGER, ARTHUR J.,
 SKEEL, DR. H. ROBERTSON,
 SKEEL, MRS. ROSWELL, JR.,
 SKELDON, FRANK L.,
 SLADE, FRANCIS LOUIS,
 SLATER, MRS. WILLIAM A.,
 SLAUGHTER, R. B.,
 SLOAN, RUSSELL R.,
 SLOAN, MRS. SAMUEL,
 SLOANE, MRS. JOHN,
 SLOCUM, THOMAS W.,
 SLOSS, A. M.,
 SMIDT, THOMAS,
 SMILEY, DANIEL,
 SMILLIE, RALPH,
 SMITH, AUGUSTINE J.,
 SMITH, AUGUSTUS,
 SMITH, CHARLES G.,
 SMITH, C. HAROLD,
 SMITH, MRS. CHARLES S.,
 SMITH, DANIEL CRANFORD,
 SMITH, EMERSON,
 SMITH, ERNEST L.,
 SMITH, HOWARD C.,
 SMITH, ORMOND G.,
 *SMITH, PIERRE J.,
 SMITH, SCHUYLER,
 SMITH, W. STEBBINS,
 SMITHERS, CHARLES,
 SMYTH, CLIFFORD,
 SMYTH, DAVID W.,
 SMYTH, FRANCIS,
 SMYTH, MRS. FRANCIS,
 SNARE, FREDERICK,
 SNOW, E. G.,
 SNYDER, VALENTINE P.,
 SODEN, CHARLES P.,
 SOLDWEDEL, FREDERICK A.,
 SONDHEIM, PHINEAS,
 SOULE, LOUIS H.,
 SPALDING, EDWARD E.,
 SPALDING, H. BOARDMAN,
 SPALDING, KEITH,
 SPARROW, MRS. EDWARD W.,
 SPEAR, JAMES, JR.,
 SPEARS, MISS ETHEL D.,
 SPEERS, WILLIAM CHRISTIAN,
 SPEDDEN, FREDERIC O.,
 SPENCER, MRS. EDWARDS,
 *SPERRY, WILLIAM M.,
 SPIES, MISS ALLIE,
 SPITZNER, GEORGE W.,

*DECEASED

- SPRINGS, RICHARD A.,
 SQUIRE, EBEN H. P.,
 STAFFORD, MRS. WILLIAM FREDERICK,
 STANDINGER, CHARLES R.,
 STANLEY, ALFRED,
 STANWICK, CHARLES A.,
 STARR, HOWARD W.,
 STARR, LOUIS MORRIS,
 STAUB, T. VIVIAN,
 STEARNS, LOUIS,
 STEBBINS, E. VAIL,
 STEELE, CHARLES,
 STEFFANSON, MRS. H. B.,
 STEIN, MRS. ALEXIS W.,
 STEINBECK, EDWARD,
 STEINKAMP, WILLIAM H.,
 STEINMETZ, JOHN A.,
 STELLE, L. RANDOLPH,
 STEPHENS, OLIN J.,
 STEPHENS, RODERICK,
 STEPHENSON, RALPH A.,
 STERLING, MRS. ROBERT D.,
 STERN, ALBERT,
 STERN, BENJAMIN,
 STETSON, J. P.,
 STEVENS, FREDERIC W.,
 STEWART, ALEXANDER M.,
 STEWART, CECIL P.,
 STEWART, GEORGE C.,
 STEWART, PERCY HAMILTON,
 STEWART, MRS. PERCY HAMILTON,
 STEWART, W. A. W.,
 STEWART, WILLIAM R.,
 STICKNEY, MRS. HENRY F.,
 STIER, MRS. GEORGE J.,
 STIER, JOSEPH F.,
 STILLMAN, JAMES A.,
 STILLMAN, MISS JANE,
 STILLMAN, JOSEPH F.,
 STILLMAN, LELAND S.,
 STILLMAN, PAUL F.,
 STIMPSON, EDWIN B.,
 ST. JOHN, DR. F. B.,
 STOCKWELL, MISS FRANCES T.,
 STOKES, FREDERICK A.,
 STONE, CHARLES A.,
 STONE, MISS ELIZABETH B.,
 STONE, MISS ELLEN J.,
 STONE, ROBERT G.,
 STORRS, FRANK V.,
 STORRS, LUCIUS S.,
 STOUT, ANDREW V.,
 STRANGE, MRS. EDWIN B.,
 STRAUS, H. GRANT,
 STRAUS, HERBERT N.,
 STRAUS, MRS. NATHAN, JR.,
 STRAUS, PERCY S.,
 STRAUSS, ALBERT,
 STRAUSS, CHARLES,
 STRAUSS, FREDERICK,
 STRAUSS, MARTIN,
 STREETER, DANIEL W.,
 STRITTER, MISS E. ELEANOR,
 STRONG, BENJAMIN, JR.,
 STRONG, JAMES R.,
 STRONG, RICHARD A.,
 STROOCK, JOSEPH,
 STUART, MRS. DAVID,
 STUART, ROBERT,
 STUNKARD, PROF. HORACE W.,
 STURGES, CLARENCE B.,
 STURGIS, REGINALD H.,
 SUCKLEY, MRS. R. B.,
 SULLIVAN, MRS. JAMES,
 SULZBERGER, ARTHUR HAYES,
 SUTRO, LIONEL,
 SWAN, JAMES A.,
 SWAN, MRS. J. ANDREWS,
 SWAN, JOSEPH R.,
 SWANSON, DR. F. J.,
 SWANZY, MRS. FRANCIS MILLS,
 SWARTWOUT, RICHARD H.,
 SWARTWOUT, ROBERT EGERTON,
 SWAYNE, FRANCIS BOND,
 SWAYNE, MRS. FRANCIS BOND,
 SWENSON, S. A.,
 SWIFT, MISS ALICE M.,
 SWORDS, WILLIAM VOORHIS,
 SYKES, WALTER H., JR.,
 SYMS, DR. PARKER,
 TAFT, HENRY W.,
 TAG, ALBERT,
 TALMADGE, MRS. E. T. H.,
 TANENBAUM, MOSES,
 TAPPIN, LINDSLEY,
 TAYLOR, MRS. HENRY OSBORN,
 TAYLOR, HERBERT C.,
 TAYLOR, JAMES B.,
 TAYLOR, MOSES,
 TAYLOR, ROBERT COLEMAN,
 TAYLOR, WILLIAM A.,
 TAYLOR, WILLIAM R. K.,
 TENNEY, DANIEL G.,
 TERRY, EDMUND R.,
 TERRY, JOHN T.,
 TERRY, MRS. JOHN T.,
 TERRY, RODERICK, JR.,
 TERRY, WYLLYS,
 THATCHER, ARCHIBALD G.,
 *THATCHER, MRS. GEORGE W.,

*DECEASED

THATCHER, MRS. T. D.,
 THAW, J. C.,
 THAYER, HARRY BATES,
 THEBAUD, MRS. PAUL,
 THEES, JOHN D.,
 THIERROT, CHARLES H.,
 THOMAS, MRS. HOWARD L.,
 THOMAS, SETH E., JR.,
 THOMPSON, FARRINGTON M.,
 THOMPSON, WILLIAM BOYCE,
 THOMSON, JAMES L.,
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 *THORNE, MRS. JONATHAN,
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 THURSBY, MRS. SYDNEY,
 TIDD, GEORGE N.,
 TIEDEMANN, HENRY F.,
 TIEDEMANN, THEODORE,
 TIFFANY, G. STANTON,
 TIFFANY, MRS. G. STANTON,
 TIFFANY, LOUIS C.,
 TILNEY, DR. FREDERICK,
 TILT, ALBERT,
 TILTON, MRS. JOSEPH W.,
 TIMME, WALTER, M.D.,
 TIMOLAT, JAMES G.,
 TIMPSON, JAMES,
 TINQUE, WILLIAM J.,
 TITUS, ROBERT R.,
 TODD, W. PARSONS,
 TOMBS, MRS. HELEN GLIDDEN,
 TOMPKINS, MISS AUGUSTA N.,
 TOWNE, PAUL R.,
 TOWNSEND, DANIEL J.,
 TOWNSEND, MRS. E. M.,
 TOWNSEND, EDWIN S.,
 TOWNSEND, HOWARD,
 *TOWNSEND, H. N.,
 TOWNSEND, J. H.,
 TREE, RONALD,
 TRENCH, CHARLES S.,
 TRIMBLE, ARTHUR R.,
 TRIMBLE, MRS. RICHARD,
 TRUMBULL, WALTER,
 TRUSLOW, HENRY A.,
 TUCKER, MRS. AGNES,
 TUCKER, CARL,
 TUCKER, JOHN,
 TUCKERMAN, PAUL,
 TURNBULL, ARTIUR,
 TURNBULL, MRS. RAMSAY,
 TURNBULL, WILLIAM,
 TURNURE, GEORGE E.,

TWEED, MRS. CHARLES H.,
 TWEED, HARRISON,
 TYLER, MRS. VICTOR MORRIS,
 TYRODE, DR. MAURICE V.,
 VALENTINE, MISS MARGUERITE E.,
 VALENTINE, DR. WILLIAM A.,
 VAN ALSTYNE, MISS MABEL H.,
 VAN BEUREN, DR. FREDERICK T., JR.,
 VAN CORTLAND, AUGUSTUS,
 VANDERBENT, TEUNIS J.,
 VANDERBILT, WILLIAM H.,
 VANDERLIP, FRANK A.,
 VANDERPOEL, MRS. JOHN A.,
 VAN DER POEL, MRS. SAMUEL OAKLEY,
 VAN GERBIG, BAREND,
 VAN INGEN, MRS. E. H.,
 VAN INGEN, DR. PHILIP,
 VAN NORDEN, M. L.,
 VAN NORDEN, OTTOMAR H.,
 VAN NOSTRAND, B. T.,
 VAN NOSTRAND, NORMAN W., JR.,
 VAN RENSSELAER, KILIAEN,
 VAN SINDEREN, HOWARD,
 VAN VLECK, ERNEST ALAN,
 VAN WEZEL, MRS. LOUISA,
 VARIAN, WILBUR L.,
 VEATCH, A. C.,
 VERNAM, CLARENCE C.,
 VERNAY, ARTHUR S.,
 VETTEL, MRS. ROSA,
 VIETOR, THOMAS F.,
 VILLA, ALFONSO P.,
 VIRGIN, DR. FREDERIC O.,
 VOISLAWSKY, DR. ANTONIE P.,
 VOELKER, JOHN PH.,
 VOGELSTEIN, LUDWIG,
 VOIGHT, WILLIAM L.,
 VON BERGEN, W. H.,
 VON BERNUTH, FREDERICK A., JR.,
 VON Lengerke, JUSTUS,
 VON ZEDLITZ, MRS. ANNA M.,
 VOORHIS, MISS LOUISE,
 VREELAND, FREDERICK K.,
 VUILLEUMIER, DR. JULES A.,
 WADLEIGH, FRANCIS RAWLE,
 WADSWORTH, W. M.,
 WAGNER, MISS H. C.,
 WAKELEE, JUSTUS I.,
 WALBRIDGE, HENRY D.,
 WALKER, BRYANT,
 WALKER, GUSTAVUS A.,
 WALKER, JOHN B., M.D.,
 *WALKER, JOSEPH,
 WALKER, MISS MIRIAM DWIGHT,
 WALKER, STUART,

*DECEASED

- WALLER, STEWART,
 WALLERSTEIN, DR. MAX,
 WALTER, EDGAR,
 WALTER, MARTIN,
 WALTER, WILLIAM I.,
 WARBURG, PAUL M.,
 WARBURTON, BARCLAY H., JR.,
 WARD, ARTEMAS,
 WARD, FRANCIS L.,
 WARD, FREEMAN F., M.D.,
 WARD, MELBOURNE,
 WARDNER, HENRY STEELE,
 WARDWELL, ALLEN,
 WARENDORFF, HERMAN,
 WARNER, GEORGE H.,
 WARNOCK, JAMES KNOX,
 WARREN, MRS. FRANK HAMILTON,
 WASHBURN, THOMAS G.,
 WASHBURN, WILLIAM IVES,
 WASHINGTON, GEORGE A., 2d.,
 WASSERMAN, SAMUEL,
 WATERBURY, MISS FLORENCE,
 WATERBURY, JOHN I.,
 WATERHOUSE, M. M.,
 WATSON, CHARLES F.,
 WATSON, MRS. J. HENRY.
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 WATT, THOMAS L.,
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 WEBB, F. EGERTON,
 WEBB, J. GRISWOLD,
 WEBB, J. LOUIS,
 WEBB, VANDERBILT,
 WEBB, MRS. VANDERBILT,
 WEBB, MRS. WILLIAM SEWARD,
 WEBB, W. SEWARD, JR.,
 WEBER, ORLANDO F.,
 WEBSTER, H. M.,
 WEBSTER, MRS. J. E. BURDICK,
 WEEKS, ANDREW GRAY,
 WEISS, MRS. CHARLES,
 WEISS, S. J.,
 WEITLING, WILLIAM W.,
 WELCH, HENRY K. W.,
 WELCH, LEWIS S.,
 WELCHER, MISS ALICE L.,
 WELLDON, SAMUEL A.,
 WELLS, EDWARD H.,
 WELLS, MRS. JOHN,
 WELSH, MRS. S. CHARLES,
 WENDELL, MRS. TEN EYCK,
 WENTZ, THEODORE,
 WERTHEIM, MRS. MAURICE,
 WESSELL, ARTHUR L.,
 WEST, MRS. MADELAINE H.,
 WESTOVER, M. F.,
 WHEELER, MISS JULIA W.,
 WHEELOCK, WILLIAM H.,
 WHEELWRIGHT, DR. JOSEPH S.,
 WHITE, MISS CAROLINE,
 WHITE, MISS EDITH HAMILTON,
 WHITE, MRS. E. LAWRENCE,
 WHITE, MRS. GLENN W.,
 WHITE, HAROLD T.,
 WHITE, J. G.,
 WHITE, LEONARD D.,
 WHITE, MISS MARTHA R.,
 WHITE, WILLIAM FULLERTON,
 WHITEHEAD, W. S.,
 WHITEHOUSE, WILLIAM F.,
 WHITING, DR. CHARLES A.,
 *WHITING, CHARLES SEAMAN,
 WHITING, MISS GERTRUDE,
 WHITMAN, CLARENCE,
 WHITMAN, WILLIAM, JR.,
 WHITNEY, ARTHUR E.,
 WHITNEY, MRS. GEORGE,
 WHITNEY, H. F.,
 WHITNEY, MRS. HOWARD F.,
 WHITNEY, TRAVIS H.,
 WHITRIDGE, ARNOLD,
 WHITTEMORE, GEORGE W.,
 WHITTEMORE, HOWARD,
 WHITTLESEY, M. M.,
 WIBORG, F. B.,
 WICKERSHAM, CORNELIUS W.,
 WICKERSHAM, GEORGE W.,
 WICKHAM, MISS F. ETHEL,
 WIESE, WILLIAM,
 WILBUR, JAMES BENJAMIN,
 WILCOX, PROF. ALICE WILSON,
 WILCOX, T. F.,
 WILE, EDWIN,
 WILKINS, F. H.,
 WILLCOX, MISS MARY A.,
 WILLETS, CHESTER A.,
 WILLETS, J. MACY,
 WILLIAMS, ARTHUR,
 WILLIAMS, DAVID,
 WILLIAMS, H. PUSHAE,
 WILLIAMS, MRS. PERCY H.,
 WILLIAMS, RALPH J.,
 WILLIAMS, RICHARD H., JR.,
 WILLIAMS, ROGER BUTLER, JR.,
 WILLIAMS, WILLIAM H.,
 WILLIAMSON, G. DE WITT,
 WILLIS, MRS. HOADLEY,

*DECEASED

WILLIS, W. P.,
 WILLISTON, JAMES R.,
 WILSON, CHARLES B.,
 WILSON, HENRY WILLIAM,
 WILSON, R. THORNTON,
 WIMPFHEIMER, CHARLES A.,
 WING, JOHN D.,
 WING, L. STUART,
 WING, S. BRYCE,
 WINGATE, GEORGE W.,
 WINSLOW, PEARSON,
 WINTER, EMIL,
 WINTER, EZRA,
 WINTHROP, EGERTON L.,
 WISE, EDMOND E.,
 WISE, ROBERT LOVIS,
 *WISNER, CHARLES,
 WITHERBEE, MRS. FRANK S.,
 WITTMAN, JOSEPH,
 WOBIE, G. ARTHUR,
 WOLOM, WILLIAM H., M.D.,
 WOLF, RALPH,
 WOLKWITZ, ERNEST,
 WOOD, ARNOLD,
 WOOD, EDWARD R., JR.,
 WOOD, GILBERT CONGDON,
 WOOD, J. WALTER,
 WOOD, MRS. M. F.,
 WOOD, MRS. TURNBULL,
 WOOD, WILLIAM CONGDON,
 WOODHOUSE COMPANY, J. S.,

WOODWARD, KENNETH N.,
 WOODWARD, MRS. WILLIAM,
 WOOLEY, C. M.,
 WOOLEY, SCUDDER J., M.D.,
 WOOLSEY, GEORGE M.,
 WORCESTER, WILFRED J.,
 WORK, BERTRAM G.,
 WORKS, WINFIELD F.,
 WORTHINGTON, HENRY R.,
 *WORTLEY, R. M. STUART,
 WRAY, MISS JULIA,
 WRIGHT, MISS IRENE E.,
 WULP, WILLIAM C.,
 WUNDERLICH, HERMANN,
 WURM, DR. CARL, JR.,
 WYLIE, JAMES S.,
 YORKE, GEORGE M.,
 YOUNG, MISS ANNETTE INNIS,
 YOUNG, MRS. A. MURRAY,
 YOUNG, ROLAND KEITH,
 ZABRISKIE, MISS ETHEL,
 ZABRISKIE, GEORGE A.,
 ZANETTI, J. ENRIQUE,
 ZEHNDER, CHARLES H.,
 ZELLER, JOSEPH WALTER,
 ZENO, NORMAN L.,
 ZIMMERMAN, A. G.,
 ZIMMERMANN, MISS MARIE,
 ZINSER, AUGUST,
 ZINSER, WILLIAM H.,
 ZOLLER, CHARLES,

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 CUYLER, MISS ELEANOR DEGRAFF,
 FIELD, MRS. MARSHALL,
 FIELD, MRS. WILLIAM B. OSGOOD,
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 GRANT, MRS. DEFOREST,
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 TILFORD, MRS. HENRY M.,
 TOWNSEND, MRS. E. M.,
 TRIMBLE, MRS. RICHARD,
 WEBB, MRS. ALEXANDER S.,
 WHITNEY, MRS. GEORGE,

WOODWARD, MRS. WILLIAM,

*DECEASED

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| THE DUKE OF BEDFORD, K.G., F.R.S., | *DR. F. L'HOEST, |
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| COL. J. C. FAUNTHORPE, | *DR. PHILIP LUTLEY SCLATER, |

Fellows†

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| BARBOUR, THOMAS, | LEE, PROF. FREDERIC S., |
| BEEBE, WILLIAM, | LUCAS, DR. FREDERIC A., |
| *BICKMORE, PROF. ALBERT S., | MCGREGOR, PROF. J. H., |
| BLAIR, DR. W. REID, | MAC CALLUM, DR. GEORGE A., |
| BRISTOL, PROF. CHARLES L., | MATTHEW, DR. W. D., |
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| CRANDALL, LEE S., | OSBORN, PROF. HENRY FAIRFIELD, |
| DAVENPORT, DR. CHARLES B., | OSBURN, DR. RAYMOND C., |
| DEAN, DR. BASHFORD, | PORTIELJE, A. F. J., |
| DITMARS, R. L., | RAVEN, H. C., |
| *DUTCHER, WILLIAM, | SCHULTE, PROF. H. VON W., |
| GRANT, MADISON, | SCOTT, DR. GEORGE G., |
| GREGORY, DR. WILLIAM K., | SETON, ERNEST THOMPSON, |
| GRINNELL, GEORGE BIRD, | SHELDON, CHARLES, |
| GUDGER, PROF. E. W., | SETH-SMITH, DAVID, |
| HARTLEY, G. INNESS, | STOCKARD, DR. CHARLES R., |
| HORNADAY, DR. WILLIAM T., | THAYER, GERALD B., |
| *HUNTINGTON, DR. GEORGE S., | TOWNSEND, DR. CHARLES H., |
| LANG, HERBERT, | WILSON, PROF. EDMUND B., |

†The qualifications for this class rest solely upon scientific achievement.

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| T. H. GILLESPIE, | MAJOR C. G. STURTEVANT, |
| | G. TYRWHITT-DRAKE, |

*DECEASED

CHARTER
OF THE
New York Zoological Society

CHAPTER 435, LAWS OF 1895.

AN ACT to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the city of New York.

As amended by Chapter 146 of the Laws of 1902; and by Chapter 240 of the Laws of 1910.

See Chapter 432 of the Laws of 1900.

See Chapter of the city of New York, Section 626 of the Laws of 1901.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Charles A. Dana, Oswald Ottendorfer, Andrew H. Green, William H. Webb, Henry H. Cook, Samuel D. Babcock, Charles R. Miller, George G. Haven, J. Hampden Robb, Frederick W. DeVoe, J. Seaver Page, Rush C. Hawkins, David James King, Wager Swayne, Charles A. Peabody, Jr., Charles E. Whitehead, Charles R. Flint, Samuel Parsons, Jr., Mornay Williams, Henry E. Gregory, Isaac W. Maclay, Isaac Rosenwald, Hugh N. Camp, Andrew D. Parker, Cornelius Van Cott, William F. Havemeyer, Frederick Shonnard, William W. Thompson, Alexander Hadden, Edward L. Owen, John H. Starin, Rush S. Huidekoper, William W. Goodrich, Albert H. Gallatin, Frederick S. Church, Edward C. Spitzka, Robert L. Niles, Madison Grant, C. Grant La Farge, William Van Valkenburg, and such other persons as may, under the provisions of its by-laws, become members of the corporation hereby created, are hereby created a body corporate and politic, by and under the name of New York Zoological Society.

SEC. 2. Said corporation shall have power to establish, maintain and control zoological parks, gardens, or other collections for the promotion of zoology and kindred subjects, and for the instruction and recreation of the people. Said corporation may collect, hold, and expend funds for zoological research and publication, for the protection of wild animal life, and for kindred purposes, and may promote, form, and co-operate with other associations with similar purposes, and may purchase, sell, or exchange animals, plants, and specimens appropriate to the objects for which it was created.

SEC. 3. The managers of said corporation shall have power to make and adopt by-laws for the management and government of its affairs and business, for the admission, suspension, and expulsion of its members, and for the terms and conditions of membership; to prescribe the number and mode of election of its officers; to define their duties; to provide for the safe-keeping of its property, and from time to time to alter and modify its By-laws.

SEC. 4. The affairs and business of said corporation shall be managed and controlled by a board of managers, the number of whom shall be prescribed by the by-laws. The first board of managers shall be divided by lot into three classes, equal in number, one of which classes shall hold office for one year, an-

other for two years, and the other for three years; and all persons elected to be managers at any subsequent election shall hold office for three years, and until others are elected in their stead. There shall be a president, two vice-presidents, treasurer and secretary, to be elected by the board of managers annually, who shall hold office until others are elected in their stead. The first meeting under this act may be held at any time upon a notice of five days, signed by any five of the incorporators named in the first section of this act, fixing a time and place for such meeting, a copy whereof shall be mailed to each of said incorporators at his usual post-office address, and twelve of such incorporators shall be a quorum for the purpose of organization, adoption of by-laws, and election of officers. No manager of said corporation shall be interested, directly or indirectly, in any contract concerning its property or affairs.

SEC. 5. Said corporation may raise money by the issue of bonds, secured by a mortgage on any or all of its property not acquired from said city or state.

SEC. 6. Said corporation may take, purchase, and hold real and personal estate necessary for the purpose of its incorporation, and shall possess the general powers and be subject to the restrictions and liabilities prescribed in Article II of Chapter 23 of the Consolidated Laws, entitled "General Corporation Law," being chapter 28 of the Laws of 1909.

SEC. 7. The commissioners of the sinking fund of the said city are authorized in their discretion to allot, set apart, and appropriate for the use of said corporation, any of the lands belonging to said city north of One Hundred and Fifty-fifth Street, but not in the Central Park, and such appropriation may be revoked if, after the expiration of five years from the passage of the act, a zoological garden is not established thereon; said grounds thus set apart and appropriated shall be used for no purpose whatsoever except those aforesaid. As soon as any lands are set apart the Mayor of the said city of New York, and the President of the Department of Parks of said city, shall become and be *ex-officio* members of the board of managers of said corporation. If at any time the animals now composing the menagerie of Central Park shall be removed therefrom by the authorities having charge thereof, said authorities may make an arrangement with the incorporators named in this act or the corporation formed by them for leasing or sale of such animals to such incorporators or corporation, and said incorporators or corporation shall have a preference over any other person or corporation in respect thereto upon the same terms which said authorities could make with any such other person or corporation, or upon such other terms as to such authorities may seem proper, but nothing herein provided shall be construed as giving the commissioners of the Department of Public Parks authority to sell, lease, transfer, or in any other wise dispose of said animals or other property connected with or belonging to said menagerie.

SEC. 8. Admission to the said gardens shall be free to the public for at least four days, one of which shall be Sunday, in each week, subject to such rules and regulations as shall be prescribed by said corporation.

SEC. 9. This act shall take effect immediately.

AN ACT to amend chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York" in relation to real and other property.

Became a law May 26, 1917, with the approval of the Governor. Passed, three-fifths being present.

ACCEPTED BY THE CITY.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Chapter four hundred and thirty-five of the laws of eighteen hundred and ninety-five, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a zoological garden in the City of New York," as amended by chapter two hundred and forty of the laws of nineteen hundred and ten, is hereby further amended by adding thereto a new section to read as follows:

7-a. The board of estimate and apportionment in the City of New York may, in its discretion, set apart and appropriate upon such conditions as it may deem expedient for the extension and development of the work and objects of the said New York Zoological Society, the whole or any part of that portion of Bronx Park in the City of New York, lying to the south of Pelham avenue and Pelham parkway, for the use of the said New York Zoological Society, the said lands so to be appropriated to be described particularly in the order of the board of estimate and apportionment hereby authorized. The said board of estimate and apportionment may also, in its discretion at the time of setting apart and appropriating said lands or any part thereof to the New York Zoological Society, and annually thereafter, in addition to any sum or sums which it may have appropriated for the support and maintenance of the New York Zoological Park, appropriate to the use of said society, such sum or sums in its discretion for the care and maintenance of the additional lands that may be allotted to the said society under the authority hereby conferred, as it may deem best.

2. This act shall take effect immediately.

New York Zoological Society

AND THE

New York Aquarium

CHAPTER 441, LAWS OF 1902.

AN ACT to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium.

As amended by Chapter 239 of the Laws of 1910.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Chapter four hundred and forty-one of the laws of nineteen hundred and two, entitled "An Act to authorize a further appropriation to the New York Zoological Society for the support of the New York Aquarium," is hereby amended to read as follows:

SECTION 1. The Board of Estimate and Apportionment of the City of New York may annually, in its discretion include in the budget for the then next ensuing financial year, in addition to any sum or sums which may be appropriated for the adequate support and maintenance of the New York Zoological Park or gardens, situated in the borough of the Bronx, and administered and controlled

by the New York Zoological Society, a further sum or sums, in its discretion, for the use of the said New York Zoological Society, provided, however, that the additional appropriation hereby authorized shall be made only in case an agreement is entered into between the said New York Zoological Society and the City of New York, acting by its Board of Estimate and Apportionment for the adequate keeping, maintenance, extension, preservation and exhibition of the building and approaches thereto and collection of aquatic animals and plants contained therein, known as the New York Aquarium, situated in the Battery Park in the Borough of Manhattan in said city, and also for furnishing opportunities for study, research and publication in connection with said collections, which contract the said Board of Estimate and Apportionment is hereby expressly authorized, in its discretion, to make upon such terms and conditions as may be agreed upon with the said New York Zoological Society, and which contract shall also provide how the duty of the commissioner of parks for the borough of Manhattan and Richmond in respect to maintaining the said aquarium now imposed upon him by law shall be performed.

SEC. 2. This act shall take effect immediately.

GRANT OF SOUTH BRONX PARK
TO THE
New York Zoological Society

At a special meeting of the Commissioners of the Sinking Fund, City of New York, held on March 24, 1897, a resolution was passed allotting South Bronx Park for the use of the New York Zoological Society upon conditions entirely satisfactory to the Society.

The full text of the resolution is as follows:

WHEREAS, by chapter 435 of the Laws of 1895, entitled "An act to incorporate the New York Zoological Society and to provide for the establishment of a Zoological Garden in the City of New York," it is provided that the Commissioners of the Sinking Fund of the City of New York are authorized in their discretion to allot, set apart and appropriate, for the use of said corporation, any of the lands belonging to said city north of 155th Street, but not in Central Park,

RESOLVED, that the said Commissioners of the Sinking Fund do hereby allot, set apart and appropriate for the use of said corporation, a tract of land in the southern portion of Bronx Park, embracing an area of about 261 acres, and consisting of so much of said park as lies south of Pelham Avenue, upon the following terms and conditions, to wit:

First. That said grounds thus set apart and appropriated, shall be used for no other purpose whatsoever except for the purposes of said Zoological Garden as the same are specified in the act aforesaid, and that said appropriation of said lands hereby made shall be revoked if, after the expiration of three years from the date of the commencement of the work by the Park Department for the necessary improvement of the grounds as referred to and described in the sixth paragraph of this Resolution, a Zoological Garden is not established upon said tract of land.

Second. That the original equipment of buildings and animals for said Zoological Garden shall be paid for from funds contributed by the New York Zoological Society, and that said Society shall, before it enters into occupation of the allotted land and within one year from the date of this Resolution, raise one hundred thousand dollars by subscription, and within three years from the date of the commencement of the work by the Park Department for the necessary improvement of the grounds as referred to and described in the sixth paragraph of this Resolution, the further sum of at least one hundred and fifty thousand dollars. If the said Society shall fail or neglect to raise said funds within the periods respectively fixed therefor, it shall, on demand of the Commissioners of the Sinking Fund, surrender to the City of New York the land allotted to it as a site for said Garden, and all improvements made thereon. The said Society shall not mortgage its buildings or animals, or any of its property within said Garden, which is directly or indirectly maintained by the City of New York.

Third. The said Zoological Society shall have the power to establish an endowment fund from the donations and bequests, which fund shall be used solely, unless otherwise specified by the donors thereof, for the general uses and purposes of said Society. The funds of said Society, other than the sums contributed to said endowment fund, shall be expended upon buildings and other enclosures for animals, for the collections of animals, and for the general purposes of the Society. Among the funds thus to be expended shall be the subscriptions of members, life members and patrons, and all cash donations to said Society, other than those made for the purposes of the endowment fund, and all moneys derived from the sale of animals; and the net proceeds of the privileges that may be developed in said Garden, such as refreshments, boating, riding animals, the sale of photographs, etc., shall be used for, and expended in the increase of the collections; and payments from the funds of such Society, including the endowment fund, shall be made directly from the treasury of the Society.

Fourth. The library, pictures, maps, office furniture, and other movable property purchased and owned by the Society shall remain the property of the Society, and excepting living animals, may be removable at will, and every piece of such property shall bear a distinguishing mark. But no buildings, aviaries or cages may be sold or removed by said Society without the written consent of the Board of Parks. All property paid for from the maintenance fund, hereinafter referred to, shall belong to the City.

Fifth. So long as the said Society is entrusted with the control and management of the said Zoological Garden, and the city provides for the proper maintenance and care of the animals and collections therein, the said Society shall not remove any of its animals or collections for exhibition elsewhere without the consent of the Board of Parks, but if the City shall ever cease to provide for the proper maintenance and care of the said animals and collections, the said Zoological Society shall have the right, upon giving three months' notice in writing to the Board of Parks, to remove the said animals and collections owned by it. The said Society shall have the right to improve its collections by the exchange of animals, and also by the sale of animals not needed for exhibition; but all moneys derived from such sale or exchange of animals shall be used only for the purpose of increasing said collections.

Sixth. The City of New York shall annually provide the necessary funds for the maintenance and care of the Zoological Garden, its buildings, inclosures and other improvements made from time to time therein, and the animals and collections of said Society; but the appropriation for the first year is not to exceed Sixty thousand dollars (\$60,000). It shall be the duty of the City to provide from such sums or appropriations, as may be applicable thereto, the cost of the necessary improvement of the ground prior to the erection of buildings and inclosures, including such roads, walks, fences, grading, water supply, drainage and heating as may be or become necessary for the proper development of said Zoological Garden, all of which work of preparation and construction shall be performed in conformity with the plans therefor to be agreed upon between the Park Department and the Zoological Society. The said City shall also furnish the necessary supply of water, and adequate police patrol and protection, and the salaries of all persons employed directly in the service and development of the Zoological Garden shall be paid from the maintenance fund, and from such other funds as may be available for and applicable to the purpose. Payments from the maintenance fund shall be made upon vouchers filed with the Comptroller and drawn in such form as he may direct; and said Society shall annually render the year then past, made on account of the said Zoological Garden, all revenues and resources thereof, a statement of the number of the members of said Society,

of the donations received and of the number of animals in the Garden, the chief items of improvement made during the year, and all other information that the said Mayor may require.

Seventh. The Park Department shall at all times have access to the grounds, buildings and other inclosures of the said Zoological Society for general police visitation and supervision, and for all other lawful purposes. Prior to the commencement of any work on said Garden the general plan therefor shall be submitted to and approved by the Park Board, and all subsequent plans for buildings, roadways and paths shall also be so submitted and approved. No living tree shall be cut down or removed, except by the express authority of said Park Department, but the said Zoological Society shall have the right to remove dead trees and such bushes as it may be necessary to remove in the preparation of inclosures for animals, or in making other improvements. The said Department of Parks shall plant such and so many shade trees, aquatic plants, shrubs and flowers as may be necessary to enhance and secure the seclusion, beauty and usefulness of the park, and shall do and perform all the work of gardening necessary to carry out the general plan of improvement and the subsequent plans as may be agreed upon between the said Zoological Society and the said Department of Parks.

Eighth. The said Zoological Garden and its collections shall be free to the public without the payment of any admission fee or gratuity whatsoever for not less than seven hours a day on at least five days of the week, one of which shall be Sunday, and also on all legal holidays and half holidays, subject to such reasonable regulations as may be made by said Society, but the said Society may close the area devoted to the collections of animals on not more than two days in each week, and on such days may charge an admission fee which shall be fixed by said Society, and all moneys derived from such admission fees shall be expended by said Society in the increase of the collections or in the improvement of said Garden or its buildings; but the portion of the grounds situated east of Boston Road, and all the Bronx River below the Boston Road bridge shall be open to the public at all times as pleasure grounds, subject to such reasonable regulations as may be adopted by said Society with the approval of the Park Department, and the occupancy of that portion of the park by herds of animals or by collections, shall be subject to the consent of the Park Department.

Ninth. The said Zoological Society shall have the right and power to appoint, direct, control and remove all persons and officers employed by them in and about the Zoological Gardens, and to fix the salaries of such persons and officers and to make promotions, but all regular employees shall be chosen, and their salaries fixed and promotions made, by reason of special fitness and ability.

Tenth. Subject to the conditions hereinbefore contained, the said Zoological Society shall exercise entire control and management over all the affairs of the said Zoological Garden.

BY-LAWS
OF THE
New York Zoological Society

AS AMENDED ON MAY 21, 1925.

ARTICLE I.

MEETINGS OF THE SOCIETY

SECTION 1. The office and place of business of the New York Zoological Society shall be in the City of New York, unless otherwise ordered.

SEC. 2. The Society shall hold its annual meeting for the election of Managers, and other business, on the second Tuesday of January, or such day thereafter during the month of January to which said annual meeting shall adjourn.

SEC. 3. Special meetings of the Society shall be called by the Secretary, upon the request of the President or the Chairman of the Executive Committee, or at the written request of ten members.

SEC. 4. Notices of all meetings shall be mailed to each member of the Society at least three days before such meeting.

SEC. 5. At meetings of the Society twenty members shall constitute a quorum.

SEC. 6. The order of business shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of the Director of the Zoological Park.
7. Report of Director of the Aquarium.
8. Election of Managers.
9. Communications.
10. Miscellaneous business.
11. Reports and resolutions.

ARTICLE II.

BOARD OF MANAGERS

SEC. 1. The Board of Managers shall consist of thirty-six members, together with the Mayor of New York and President of the Park Board, or Commissioner for the Bronx, who shall be members *ex-officio* of the Board.

SEC. 2. Twelve Managers shall constitute a quorum; but seven Managers may transact current business, and adjourn, subject to the subsequent approval of a meeting at which a quorum shall be present.

SEC. 3. The Board of Managers shall hold an annual meeting on the twenty-sixth day of December in each year, unless said date shall fall upon a Sunday, in which event the annual meeting shall be held on the following day. Regular meetings of the Board may also be called by the Secretary on the third Tuesdays of October and April upon the request of the President or Chairman of the Executive Committee. Special meetings of the Board shall be called at any time by the Secretary upon the request of the President or Chairman of the Executive Committee, or at the written request of five managers.

SEC. 4. Notices of meetings of the board shall be mailed to each Manager at least three days before such meetings.

SEC. 5. The successors to the outgoing class of Managers shall be elected by the Society at its annual meeting, but vacancies in the board may be filled for the unexpired term by the Board of Managers, or by the Executive Committee.

SEC. 6. A Nominating Committee shall be annually appointed by the Executive Committee, and shall consist of three members of the Society at large, who shall nominate and post ten days before the annual election the names of twelve persons to succeed the outgoing class of Managers in a conspicuous place in the office of the Society.

SEC. 7. No person shall be eligible for the election of the Board of Managers except to fill vacancies, unless his name shall have been posted as a candidate by such committee, or by not less than ten members, in writing, in a conspicuous place in the office of the Society ten days before the annual election. All candidates for election as Managers must be Life Members, Patrons, Associate Founders, or Founders of the Society.

SEC. 8. Any Manager who shall fail to attend three consecutive meetings of the Board, unless excused by a vote of the Board, shall cease to be a Manager.

SEC. 9. The Board of Managers shall at its annual meeting elect a President, two Vice-Presidents, a Secretary, and Treasurer, who shall hold office for one year, or until their successors are elected. The President, Vice-Presidents, and Treasurer shall be members of the Board.

SEC. 10. The Director of the Zoological Park, the Director of the Aquarium, and all other persons employed by the Society, shall be appointed by the Board or by the Executive Committee, and shall hold office during the pleasure of the Board.

SEC. 11. The Board shall, at its annual meeting, elect an Executive Committee and Auditing Committee, which shall hold office for one year, or until their successors are elected. The Board of Managers and the Executive Committee shall also have authority to appoint such other Committees or officers as they may at any time deem advisable and to delegate to them such powers as may be necessary.

SEC. 12. The order of business of the meetings of the Board shall be as follows:

1. Roll Call.
2. Reading of minutes not previously read.
3. Report of Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of Auditing Committee.
7. Report of Director of Zoological Park.

8. Report of the Director of the Aquarium.
9. Election of Officers.
10. Election of Committees.
11. Election of new members.
12. Communications.
13. Miscellaneous business.

SEC. 13. All reports and resolutions shall be in writing, and the ayes and nays may be called on any resolution at the request of one Manager.

SEC. 14. Whenever the funds of the Society shall permit, the Board of Managers or the Executive Committee may award medals or other prizes for meritorious work connected with the objects of the Society.

ARTICLE III.

OFFICERS

SEC. 1. The officers of the Society shall consist of a President, two Vice-Presidents, a Treasurer, a Secretary, and a Director of the Zoological Park. These officers, with the exception of the Director, shall be elected at the annual meeting of the Board of Managers, but any vacancy may be filled for an unexpired term by the Board of Managers, or by the Executive Committee, until the next annual election.

SEC. 2. The President shall preside at all meetings of the Board and of the Society, and shall be *ex-officio* a member of the Executive and Auditing Committees.

SEC. 3. The Vice-Presidents shall, in the absence of the President, perform his duties and possess his powers, acting in the order of their election.

SEC. 4. The Treasurer shall receive, collect and hold, subject to the order of the Board of Managers, or the Executive Committee, all dues, subscriptions, warrants from the City, fees and securities. He shall pay all bills as ordered by the Board of Managers or the Executive Committee, and shall report to the Society at its annual meeting, and to the Board of Managers at all regular meetings, and to the Executive Committee at each meeting. He shall keep all moneys and securities in some bank or trust company to be approved by the Board of Managers or Executive Committee. The books of the Society shall at all times be open to the inspection of the Managers.

SEC. 5. The Secretary, unless relieved by the Board or Executive Committee, shall attend all meetings of the Society, of the Board and of the Standing Committees. He shall keep a careful record of all proceedings, shall have the custody of the seal, archives and books, other than books of account, and shall conduct the correspondence of the Society. He shall issue all notices and tickets, and shall perform such other duties as the Board may direct. He shall be a member *ex-officio* of the Executive, Aquarium, and Auditing Committees, and of the Scientific Council.

SEC. 6. The Director of the Zoological Park shall be elected annually by the Executive Committee at a salary to be determined by said Committee, and shall hold office until removed or his successor chosen by said Committee. He shall be the responsible administrative officer of the Park, and shall recommend to the Executive Committee candidates for the various positions in the Park. He shall also perform all such other duties in connection with the business, scientific, and literary administration of the Society as may be assigned to him by the Executive Committee.

SEC. 7. The Director of the Aquarium shall be elected annually by the Executive Committee, and shall hold office until removed or his successor is chosen by said Committee. He shall be the responsible administrative officer of the Aquarium, and shall recommend to the Executive Committee all candidates for positions in the Aquarium. The director of the Aquarium shall be *ex-officio* a member and Chairman of the Aquarium Committee. He shall perform such other duties in connection with the Aquarium as may be assigned to him by the Executive Committee.

ARTICLE IV.

COMMITTEES

SEC. 1. There shall be two standing committees, the Executive Committee and the Auditing Committee, which shall hold office for one year or until their successors are elected.

SEC. 2. The Executive Committee shall consist of eight Managers, together with the President, Secretary and Treasurer of the Society *ex-officio*. Four members including the Chairman shall constitute a quorum, and all meetings shall be called by the Chairman. The Executive Committee shall fill all vacancies in its own number and shall have the full power of the Board of Managers, except so far as such delegation of power may be contrary to law.

SEC. 3. The Executive Committee shall have the control and regulation of the collections, library and all other property of the Society, and shall have the power to purchase, sell and exchange specimens and books.

The Executive Committee shall also have power to employ and control all officials and employees of the Society, Park and Aquarium, to authorize the payment of a salary to the Chairman of the Executive Committee, the Secretary and other officials in its discretion, to fix the amount of all salaries, and generally to carry out in detail the directions of the Board of Managers and the terms of any contract between the City, or Park Board, and the Society.

SEC. 4. All the rules and regulations for the examination of applicants for the various positions in the Park and Aquarium shall be made or approved by the Executive Committee.

SEC. 5. The Executive Committee may regulate the auditing and payment for all current accounts.

SEC. 6. The Executive Committee shall annually appoint an Aquarium Committee, whose duties and powers are set forth in Section II of Article IV of these By-Laws.

SEC. 7. The Executive Committee shall annually appoint a Nominating Committee, whose duties and powers are set forth in Sections 6 and 7, Article II, of these By-Laws.

SEC. 8. It shall also appoint a Scientific Council, whose powers and duties are set forth in Section 2 of Article V of these By-Laws.

SEC. 9. The Committee shall make a written report at each regular meeting of the Board of Managers.

SEC. 10. The Auditing Committee shall consist of three regular members of the Society, in addition to the President and Secretary, members *ex-officio*, and vacancies shall be filled by the Executive Committee. It shall be the duty of the Auditing Committee to audit, annually, the accounts of the Treasurer, of the

Director of the Zoological Park, and of the Director of the Aquarium, and any other accounts of the Society, and shall report to the Board of Managers at its annual meeting.

SEC. 11. The Executive Committee shall annually appoint an Aquarium Committee, not to exceed eight members of this Society, who shall hold office until their successors are chosen. All vacancies shall be filled by the Executive Committee. The Director of the Aquarium shall be *ex-officio* a member and the Chairman of the Aquarium Committee, and such Committee may vest in him any or all of its powers. The Chairman of the Executive Committee and the Secretary of the Society shall also be *ex-officio* members of the Aquarium Committee. Three members shall constitute a quorum. The Executive Committee may delegate to the Aquarium Committee such powers as it may deem proper.

ARTICLE V.

SCIENTIFIC COUNCIL

SEC. 1. The Executive Committee shall annually appoint a Scientific Council of not more than ten members, and shall fill all vacancies. Members of the Council shall hold office until their successors are appointed.

SEC. 2. The duties of the Council shall be to act as an advisory board in all matters pertaining to the scientific administration of the Society, and especially as to the scientific features of the Park, the promotion of zoology by publications and otherwise, and the preservation of the native fauna of America.

SEC. 3. Four members, including the Chairman, shall constitute a quorum. The Chairman shall be elected annually by the Council. The Chairman of the Executive Committee and the Secretary of the Society shall be members *ex-officio* of the Council.

ARTICLE VI.

MEMBERS

SEC. 1. The present members and such others as shall become associated with them, under the conditions prescribed by the By-Laws, shall be members of this Society as long as they shall comply with the By-Laws.

SEC. 2. Members failing to comply with these By-Laws, or for other good and sufficient cause, may be expelled from the Society by the Executive Committee.

SEC. 3. Candidates for membership shall be proposed and seconded by members of the Society. The name, occupation, and place of residence of every member as proposed shall be submitted for election to the Board of Managers or the Executive Committee, and such person, when elected, shall become a member upon payment of the annual dues, or of the fees as prescribed below.

SEC. 4. There shall be a class known as Fellows, which shall consist of members of the Society who have rendered marked services to science, and shall be chosen by the Executive Committee. The privileges of Fellows shall be in all respects the same as those of regular members of the Society, but they shall be exempt from the payment of annual dues.

SEC. 5. The annual dues shall be ten dollars, payable in advance, on the first day of May of each year, but the Executive Committee may remit the dues

for the current year in the case of members elected between January 1st and May 1st of each year. The classes of membership shall be as follows:

SEC. 6. The payment of \$200 at one time shall constitute any member a Life Member.

A member who has paid annual dues for a period of five years may thereafter, at any time, upon the payment of the difference between the amount of dues already paid and \$200, become a Life Member, but such payment shall be not less than \$100.

SEC. 7. The payment of \$1,000 at one time, or in the case of a Life Member, of \$800, shall constitute any member a Patron.

SEC. 8. The payment of \$2,500 at one time, or in the case of a Patron of \$1,500, or of a Life Member of \$2,300, shall constitute any member an Associate Founder.

SEC. 9. Any member who shall donate to the Society \$5,000, or property of equal value, or any Associate Founder who shall donate \$2,500, or any Patron who shall donate \$1,000, may be elected by the Board of Managers or Executive Committee a Founder.

SEC. 10. Any member who shall have donated to the Society ten thousand dollars (\$10,000), or its equivalent, may be elected by the Board of Managers or the Executive Committee a Founder in Perpetuity. Such Founder in Perpetuity shall have the power to designate by a last will and testament his successor, who shall thereupon be entitled to all the rights and privileges of the original Founder in Perpetuity, including the right of designating in turn his successor.

SEC. 11. Any member who shall have donated to the Society \$25,000, or its equivalent, may be elected by the Board of Managers, or the Executive Committee, a Benefactor. Benefactors shall have the rights and privileges of a Founder in Perpetuity.

SEC. 12. Persons who have rendered marked service in the science of zoology or natural history may be elected Honorary Members, but not more than three such Honorary Members shall be elected in any one calendar year.

SEC. 13. A resident member who shall have rendered marked scientific or professional services to the Society in any branch of its work may be elected by the Executive Committee a Life Member, Patron, Associate Founder, or Founder. A resident of New York who shall have rendered marked service in zoology or natural history may be elected by the Executive Committee a Permanent Fellow.

SEC. 14. Non-residents who communicate valuable information to the Society, or who have rendered marked service in the science of zoology or natural history, may be elected Corresponding Members.

SEC. 15. Benefactors, Founders in Perpetuity, Founders, Associate Founders, Patrons, Life Members, Honorary Members, Permanent Fellows, Fellows, and Corresponding Members shall be exempt from annual dues.

ARTICLE VII.

PRIVILEGES OF MEMBERS

SEC. 1. A member's ticket admits the member and his immediate family to the Park on reserve days, and to all lectures and special exhibitions, and may be used by the member's immediate family, and shall be good for the current year.

SEC. 2. Admission tickets to the Park and Aquarium on reserve days are issued to members for distribution, and are good for the current year.

SEC. 3. Each member of the Society is entitled annually to a member's ticket and to ten admission tickets.

SEC. 4. Each member shall also receive one copy of the catalogue or handbook, the report and official publication of the Society, and shall have all the privileges of the Library and Members' Building.

SEC. 5. No member shall be entitled to the privileges enumerated in this Article unless his annual dues shall have been paid.

SEC. 6. The Life Members shall have all the privileges of members and ten additional admission tickets.

SEC. 7. Benefactors, Founders in Perpetuity, Founders, Associate Founders and Patrons shall have all the privileges of Life Members, and shall in addition receive copies of all scientific works published by the Society.

SEC. 8. Any member who shall fail to pay his annual dues within three months after the same shall have become due, and after notice of thirty days, by mail, shall cease to be a member of the Society; subject, however, to reinstatement by the Board of Managers or Executive Committee for good cause shown.

SEC. 9. Any person elected to membership who shall fail to qualify within three months after notice of his election shall be considered to have declined his election; but such term may be extended by the Board of Managers, or Executive Committee.

ARTICLE VIII.

FINANCES

SEC. 1. The fiscal year of the corporation shall be the calendar year commencing January 1st and ending December 31st.

SEC. 2. Neither the Society nor any of its Managers or Officers shall contract any debt which, with existing debts, shall exceed in amount the funds then in the Treasury, except to meet expenditures for which the City is liable, and for which the Society will be reimbursed by warrants from the Comptroller's office.

ARTICLE IX.

AMENDMENTS

SEC. 1. Amendments to these By-Laws may be proposed, in writing, at any meeting of the Board of Managers, and adopted by unanimous consent of the Managers present, or if such proposed amendment shall fail to receive unanimous consent, the Secretary shall, with the notices of the next meeting, send a copy of it to each Manager and state that it will be brought up for action at such meeting, when it may be passed by a majority vote.



